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WELCOME

If plasma wasn't dead when Panasonic announced last year that it was leaving the party, it certainly is now, with Samsung following suit and giving a November 30 date for its own PDP lights-out. That



leaves only LG as a plasma-supporting brand, and having just launched a 77in 4K curved OLED screen, it's clear where its ambitions lie. I wouldn't be surprised if LG quietly pulled the plug and didn't even bother to let anyone know.

Plasma has long been a favourite of home **cinema fans**, and at HCC we're hardly over the moon regarding its demise, but you know what? AV moves on! Indeed, Panasonic is doing just that with its second-gen 4K TV, the AX802 (reviewed p34), while on the audio side, Dolby Atmos is primed and ready to have you reworking your speaker setup to cater for a new breed of Blu-ray soundmix. So shed a final tear for plasma – but don't mourn for too long!

> Mark Craven **Editor**

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MENU









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Adam Rayner: The UK's foremost expert in extreme audio writes about bass, hi-fi and, er, cartoons



Adrian Justins: Made his name as the editor of What Video & TV and What Home Cinema

FEATURES

In-depth interviews and special reports. Starts... p20

20 Wising up to a wireless future

Denon unwraps its multiroom audio range

COVER STORY

22 Putting pedal to the metal

We chat to the director of Need for Speed

28 'It comes with a cinema room'

This new-build adds a dedicated movie den

84 Certified: AV-Holic

Another HCC reader shares their AV setup

90 System selector!

Putting together a setup designed to add AV excitement to your bedroom

SELECT

The place to look if you're planning to buy some new AV gear. Starts... p109

109 Gear guide

HCC's comprehensive Top 10s list only the very best home cinema kit money can buy

BULLETIN

The place for hot products, trends and technology. Starts... p7

07 Family affair

DALI's new Rubicon loudspeaker line-up

08 American Muscle

US marque announces 'signature' power amp

09 Precision-made treatments

Vicoustic brings its audio know-how to the UK

10 DALI offers no compromise

Brand joins the on-wall speaker club

12 Dolby Atmos comes home

Advanced audio format added to new AV kit

14 CEDIA 2014 awards announced

UK install firms dominate annual celebration

15 News x10

Featuring Pioneer, Onkyo, Samsung and Sony

16 Winter is coming

Captain America: The Winter Soldier prepares to shake things up on DVD, BD and 3D-BD

REGULARS

Whether you want our opinions or your own, these are the places to look. Starts... p75

75 Digital copy

Looking for 4K content? Give YouTube a try

76 Film fanatic

Three movies that deserve a TV makeover

78 The Insider

In the first of a new series, our man in America provides a US perspective on home cinema

80 Feedback

Share your thoughts with other AV addicts

92 Film franchise

Yippee ki-yay! Collecting the *Die Hard* films

122 Point of view

Is Dolby Atmos really viable in a living room?

COMPETITIONS

80 Great Blu-rays to be won!

The LEGO Movie 3D, The Raid 2 and Under the Skin up for grabs!

SUBSCRIBE! Sign up to the world's best AV magazine and you'll save money and get some great gifts p18



'The only TVs that matter are those

that offer internet-connected services'









REVIEWS

With a focus on performance, these are in-depth tests you can trust... p33

34 Panasonic TX-50AX802

Brand brings Freetime functionality to its second-gen 50in 4K/Ultra HD flatscreen

38 Yamaha RX-V577

Versatile 7.2-channel networked AV receiver is ready to take on all-comers

42 Philips 55PFS6609

Mid-range 55in Full HD 3D Ambilight TV delivers a big picture for a small price

46 Dynaudio Excite

The revamped high-end floorstanding range arrives in a 5.1 array

COVER STORY

50 Grouptest: Home is where the Smart is

Which Smart system is top of the class? We put LG, Panasonic, Samsung, Sony and Toshiba's 'net-connected services to the test

60 Primare SPA23

Premium 5.1-channel AV amplifier

62 Panasonic DMP-BDT700

A new flagship deck from the BD stalwart

64 Philips Fidelio E5

Well-connected 2.1 system with a wireless surround option

66 Canton DM9

Mid-range Bluetooth 'bar sounds supreme

68 Panasonic DMC-GH4

Shoot your own 4K content with this camera

68 Acer 6510BD

Bargain-priced Full HD DLP projector

COVER STORY **70 Xbox One Guide**

Turn your next-gen console into a TV hub!

70 Robson Acoustics Chronos

These on-wall speakers are a work of art

70 Popcorn Hour A400

Media player impresses with format flexibility

PLAYBACK

The latest Blu-rays, DVDs and videogames reviewed and rated. Starts... p95

- 96 Need for Speed 3D
- 97 Lone Survivor

The Monuments Men

Chinese Zodiac

Last Vegas

- 98 The LEGO Movie 3D
- 100 Watch Dogs

Wolfenstein: The New Order

Under the Skin

In the Flesh: Series One and Two

House of Cards: The Complete Second Season

- 101 The Raid 2
- 102 A Hard Day's Night: 50th Anniversary Restoration
- 103 Jacques Tati: Essential

The Driver

Frau Im Mond

Swallows & Amazons: 40th Anniversary

Harold and Maude

104 The Complete Dr. Phibes

Porkv's

Bloody Birthday

Devil's Due

oppo



PM-1

Planar Magnetic Headphones



Proprietary Planar Magnetic technology

technology
Life-like, natural sound quality

High sensitivity & scalability

Plush padding & reduced weight for comfort

Comprehensive set of cables and accessories

HA-1

Headphone Amplifier



Class A balanced power amplifier

Toroidal power transformer

USB DAC with DSD support

ESS 9018 Sabre³² Reference DAC

IR Remote & Bluetooth control included

BDP-103D

Universal player with Blu-ray



Dual-core fas

Darbee Visual Presence

Dual HDMI

4K up-scaling

True 24p™ video

Network

7.1-Channel analogue output Man man

BDP-105D

Flagship universal player with Blu-ray



Darbee Visual

Toroidal linea

Upgraded USB DAC supports DSD 64/128 Headphone amplifier

Dual Sabre³² Reference DACs Coaxial and optical digital inputs



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BULLETIN

→ NEWS HIGHLIGHTS ATI US marque announces 'signature' range of potent power amps VICOUSTIC Acoustic treatments with an eye on interior design CEDIA Award-winners announced! DOLBY ATMOS Next-gen audio hits your viewing room NEWS X10 The hottest news stories in bite-size chunks CAPTAIN AMERICA: THE WINTER SOLDIER Shaking up the Marvel universe on BD and DVD AND MORE!



Speaker brand DALI has launched a new series of speakers that borrows driver tech from its highend Epicon range, but targets a more affordable price point. Dubbed Rubicon, the models include a trio of floorstanders,

plus a standmount model and a slim-line on-wall LCR enclosure designed for more discreet setups. Pricing begins at £850 for the latter, and hits £4,000 for a pair of the top-flight Rubicon 8s. See p10 for more.

Looking for breaking AV news, blogs, features, & reviews? For your daily fix visit us at www.homecinemachoice.com Follow us on Twitter @hccmag



OLED gets 4K bends



LG has revealed that the world's first curved Ultra HD/4K OLED TVs will hit the UK in October in a choice of 65in and 77in screen sizes. The £6,000 65EC970V and £20,000 77EC980V

(pictured) are both able to decode broadcast signals in H.264 and HEVC H.265 codecs at 30p or 60p, ensuring that they're future-proof for viewing 4K content from streaming sites such as Netflix. As expected, these premium screens will also incorporate LG's new Smart+ TV with WebOS platform. www.lg.com/uk

UK-tuned soundbar



Yamaha has introduced the successor to its celebrated

YSP-2200 soundbar. The £800 YSP-2500 has been fine-tuned by the UK Yamaha team to make it 'sound more like a UK hi-fi product without compromising on the surround sound realism.' New features include 4K/60p passthrough, integrated Bluetooth technology for music streaming and the addition of a wireless subwoofer. The employment of Bluetooth also means that the YSP-2500 can be controlled using the free Yamaha HT Controller app. http://uk.yamaha.com

Budget automation



Archos hopes to bring home automation to the masses with a new low-cost system based

around an enhanced version of Bluetooth Smart tech, that increases the connection range (from 10 to 20m) and ramps the capacity to 13 connected devices. Priced at £200, the Smart Home starter kit includes a 7in Android Jelly Bean tablet controller, two mini cameras, two motion sensors and two weather sensors. Additional hardware includes Smart plugs. 'The connected home is a booming industry,' explains Archos CEO Loïc Poirier. www.archos.com

PLAYLIST...

Team *HCC* spins up its disc picks of the month

Wolf of Wall Street



Martin Scorsese's best film in years cuts a stunning figure on Blu-ray thanks to the platter's breathtaking visuals and sumptuous sonics.

Non-Stop (Region B BD)



This hi-def platter's impressive AV credentials make it quite easy to overlook the many plot-holes.

Arrested Development:



While this long-awaited return of the Bluths doesn't quite live up to expectations, it's still a lot of fun.

Nashville: Season 2



Relive all of the songs and scandals with this latest DVD outing for TV's biggest guilty pleasure.

Return to Nuke 'Em High:



Lloyd Kaufman reboots one of Troma's biggest franchises to impressively disgusting effect.

Precision-made treatments

Vicoustic brings its Portuguese acoustic know-how to UK homes

Give your living room an acoustic makeover

Are you satisfied with the acoustic properties of your home cinema? Whether the answer is yes, no or not sure, there's a chance your listening environment is under-performing - most rooms could be improved by a mixture of acoustic treatments, including absorption, diffusion and bass traps. This, at least, is the view of Portuguese company Vicoustic, which has re-entered the UK market thanks to a new distribution agreement with Leeds-based Audio-Technica.

HCC was treated to a behind-the-scenes look and listen at the company's HQ, near Porto, where Vicoustic showed off its state-of-the-art R&D facility with purpose-built lab and a chamber (with a fourtonne movable wall) that can be transformed from anechoic to reverberant use thanks to removable absorption panels. 'Having our own R&D lab is a great advantage,' César Carapinha, Vicoustic's CEO told HCC. 'It means we can test our products to exhaustion without worrying about the time and cost of using a third party.'



César Carapinha: 'Having our own R&D lab is a great advantage. It means we can test our products to exhaustion'

Carapinha demonstrated how adding absorption and deflection panels to a typical living room can alter the acoustics, profoundly

improving the mid-range and vocals. The precise balance between absorbing and deflecting is down to personal taste and the company makes a range of products that do one or the other – or a bit of both. It also makes a unique variable bass trap.

Aesthetic appeal

Most of Vicoustic's products are made from a combination of foam and plastic, MDF or wood. Carapinha boasts that no other company's products are as precisely made as his, proudly stating that the machine cutter for one of his panels alone costs around \$500.000.

The company also understands that acoustic

panels can only be accepted into domestic environments if they look appealing, and the company has a vast array of designs and finishes available, with varying degrees of artistic merit. Permanent installation is not always necessary and options exist for fixing the panels to a ceiling or walls, including glue, clip-in frames, Velcro and magnetic hanging strips, compatible with metal bars

Various products are available for dealing with particular ranges of frequencies and the company will suggest a range of solutions tailored to a specific room. A diagnostic tool is available on the company's website (www.

vicoustic.com), the cost of which is refunded if a customer makes a purchase.

which can be hidden behind plaster.



EXTRAS...

Small items that could make a big impression

Stephen King Films FAQ



Be it a marathon viewing of all eight(!) Children of the Corn sequels or the hidden meanings of Kubrick's

The Shining, this exhaustive £20 tome leaves no stone unturned as it charts the screen history of the legendary horror author.

TARDIS Cushion



Feel the need for a little lumbar support while you kick back and watch

a movie? Perhaps you should give this official *Doctor Who* cushion a try for just £35.

Joss Whedon: Geek King



Author (and fan) Amy Pascale digs into the life and work of the man who made geek culture hip in this revealing and

comprehensive biography. A must-read for Whedon's legions of fans and a bargain at just £20.

Ninia Mug



Add some danger to your next cuppa with this ninja mug. It comes armed with a spoon sword and

shuriken coaster! Only £13 from www.firebox.com.

DALI offers no compromise

Brand brings higher-fidelity to on-wall speakers with its Rubicon LCR

DALI has joined the likes of Artcoustic and Monitor Audio in unleashing an on-wall speaker, with the Scandinavian sound specialist claiming its full-range model offers enthusiasts a no-comprise high-fidelity alternative to typical TV-centric speaker solutions. The relatively compact Rubicon

LCR is part of a new line of monitor (Rubicon 2) and floorstanding (Rubicon 5, 6 and 8) enclosures (see p7), and doesn't require a subwoofer to fill in those low notes.

The Rubicon LCR is the first on-wall design from the brand. 'It makes sense to have a product like this nowadays, as so many people want a sound system based around a screen,' DALI CEO Lars Worre told *HCC*. 'There was plenty of cabinet space so we thought why not take our best tweeter module and put it in'. He says that the new design really gets 'the best out of the seven litres reserved for sound.'

The Rubicon LCR can be mounted either side of flatpanel TV, or deployed as part of a multichannel home theatre system. Demonstrations of the speaker confirm it's capable of prodigious bass as well as a crisp, uncoloured mid-range. To achieve the

uncharacteristically deep bass response, DALI engineers have engineered a bass port which cleverly runs up the back of cabinet behind a thin metal sheet, effectively Lars Worre: 'It makes sense to have a product like this, as so many people want a sound system based around a screen'

extending the acoustic dimensions of the cabinet by 3-4cm.

The Rubicon LCR also boasts a sonic dispersion characteristic

optimised for forward-facing on-wall placement. 'There's no single sweet spot, so it's ideal when facing a family of four on a sofa,' explains Worre.

Tuned for the real world

Although audiophile by nature, the DALI CEO says the new Rubicon range has been tuned for real-world use. 'We know a lot of people will be playing Spotify at home,' he says, adding: 'The Rubicons were mainly tuned on CD, a mid-way point between streaming quality and HD audio. If we tuned only using high-res audio files we wouldn't

have a clue how these speakers would sound if you only played Spotify. We actually use a Denon CD transport in our listening room, a very old one by the way; it sounds more analogue than most other players we've heard; it doesn't have the edginess that so many CD players have. When I say analogue, I actually mean real — reality is analogue!

Although dubbed the LCR, DALI suggests its slender speaker can be used all around in a 5.1 array, with sub-bass duties handled by the brand's SUB P-10 DSS woofer.



Yamaha gains 4K Aventage

New AVRs bring wireless tech and 4K/60p passthrough to high-end range

Yamaha is giving its step-up Aventage AV receiver range a makeover this Summer with the introduction of four new RX-A40 models.

The Wi-Fi-toting RX-A840 (£900), RX-A1040 (£1,000), RX-A2040 (£1,500) and the flagship RX-A3040 (£2,000) all conform to the brand's Total Purity Concept, using discrete power amplifiers to minimise distortion and independent power supplies to prevent digital noise affecting circuitry. An H-Frame construction and fifth foot are utilised to limit chassis vibration in pursuit of premium sonics.

Support for the latest HDMI 2.0 specification is on board, and all models can passthrough 4K/60p

video and upscale 1080p signals to 4K (with the RX-A3040 allowing you to upscale an SD signal to $3,840 \times 2,160$).

In addition to bringing life to multichannel film soundtracks, the Aventage models cater for network music streaming – Spotify Connect,

Napster, HTC Connect, MusicPlay, AirPlay, DLNA and vTuner are all supported.







Designed and made by perfectionists, any of the range will bring a live performance into your own home. Available in a range of quality finishes or bespoke finish to blend into your design, nothing is too much trouble. Hand made in Vienna and used in the Grand Festival Hall in Salzburg.

Love at first sound



ATMOS ON DISC

Which films could arrive on Atmos BD this year?

Godzilla



The size of the monsters and the destruction they unleash in Gareth Edwards' blockbuster creature-feature was tailor-made for Atmos. Rumours already point to this being the first new title to be released on Blu-ray with the 'object-based' audio format.

Gravity

The poster boy for Dolby Atmos – directed by audio-visual innovator Alfonso Cuaron – *Gravity* bagged numerous awards for its sound design after its theatrical debut and has already had a Blu-ray release, but a Special Edition with Atmos soundtrack is surely on the cards.

Noah

One title name-checked by Dolby's Brett Crockett in his official blog, this Biblical epic starring Russell Crowe and directed by Darren Aronofsky hit Atmos cinemas at the end of March. A regular Blu-ray is already scheduled for the end of July, but could it get double-dipped?

Dawn of The Planet of the Apes



Only recently launched in Atmos cinemas, this big-budget monkeytastic sequel will be most likely due for a BD release around Christmas – which should be enough time to have those treeswinging apes screeching from your Atmos ceiling speakers.

The Expendables 3

With its predecessor offering a DTS Neo: X 'optimised' multichannel mix, distributor Lionsgate has shown it's keen to embrace new domestic audio tech. So hopefully the continuing adventures of Sly Stallone's band of not-so-merry men will sport an Atmos bitstream derived from its cinema mix.

Dolby Atmos comes home

Advanced audio format added to forthcoming AV hardware

The next-gen cinema surround format Dolby Atmos has been given the green light to bring object-based audio to domestic cinema rooms, with Onkyo, Pioneer, Denon and Yamaha all announcing compatible hardware to launch later this year.

The news was announced simultaneously in late June by the hardware companies and on Dolby's official blog. In the latter, Brett Crockett, Dolby's Director of Sound Research, explained the decision to move Atmos out of theatres and into living rooms.

'Dolby Atmos has the amazing ability to have sounds come from above you. In the movie *Noah*, for instance, Dolby Atmos in the cinema made

it sound like the torrential rains were pouring down from the sky on top of you. And if you see *Godzilla* in a Dolby Atmos theatre, hearing the monster roar above you is beyond realistic – it's terrifying. You're probably wondering

how you can recreate this effect in your living room. We want to make bringing Dolby Atmos into your home as easy as possible, so we've given you choices.

'If you're willing and able to install speakers in your ceiling, there will be great options. If that's not possible for you our partners will offer new Dolby Atmos-enabled speakers that produce full, detailed, overhead sound from speakers located where your conventional speakers are now.

'How do we create the sensation of sounds above your head if there are no speakers above your head?' asked Crockett. 'It's complicated, but it all comes down to understanding the physics of sound waves and understanding the way your brain interprets those sound waves.'

Running with regular Blu-ray

No new hardware beyond processing and speakers is required. Traditional Blu-ray discs will launch with Dolby Atmos bitstreams, which have been introduced to the Dolby TrueHD specification.
All standard BD players will be able to passthrough those bitstreams to compatible AVRs/processors. The Dolby Digital Plus codec is also getting an Atmos upgrade, so the format could be introduced to film streaming services, with Netflix being the most likely.

Dolby Atmos-enabled hardware so far announced includes a slate of AVRs, and not all at a premium price. For instance, Onkyo has launched the £2,000 TX-NR1030 and £2,500 TX-NR3030, yet confirmed

that a firmware update (due September) will add Atmos adventures to its TX-NR636, TX-NR737 and TX-NR838 mid-range models.

Elsewhere, Denon has announced its



9-channel AVR-X4100W and 11-channel AVR-X5200W for an Autumn launch, priced at £1,300

and £1,700 respectively, while Pioneer's in-bound SC-LX88, SC-LX78 and SC-LX58 models (priced between £2,200 and £1,400) will get an Atmos firmware update. Yamaha's recently launched high-end RX-A2040 and RX-A3040 AV receivers will also support the new audio format.

With Crockett explaining that it's possible to have a Dolby Atmos array with 34 speakers, those with true high-end ambitions may turn away from the mass market propositions – which will generally cater toward two new 'reference' Atmos systems of 5.1.4 and 7.1.4 – towards a new breed of advanced processor. French audio marque Trinnov will launch its Altitude³² (a 32-channel Atmos-ready pre-amp) in September, distributed in the UK by Anthem AVS.

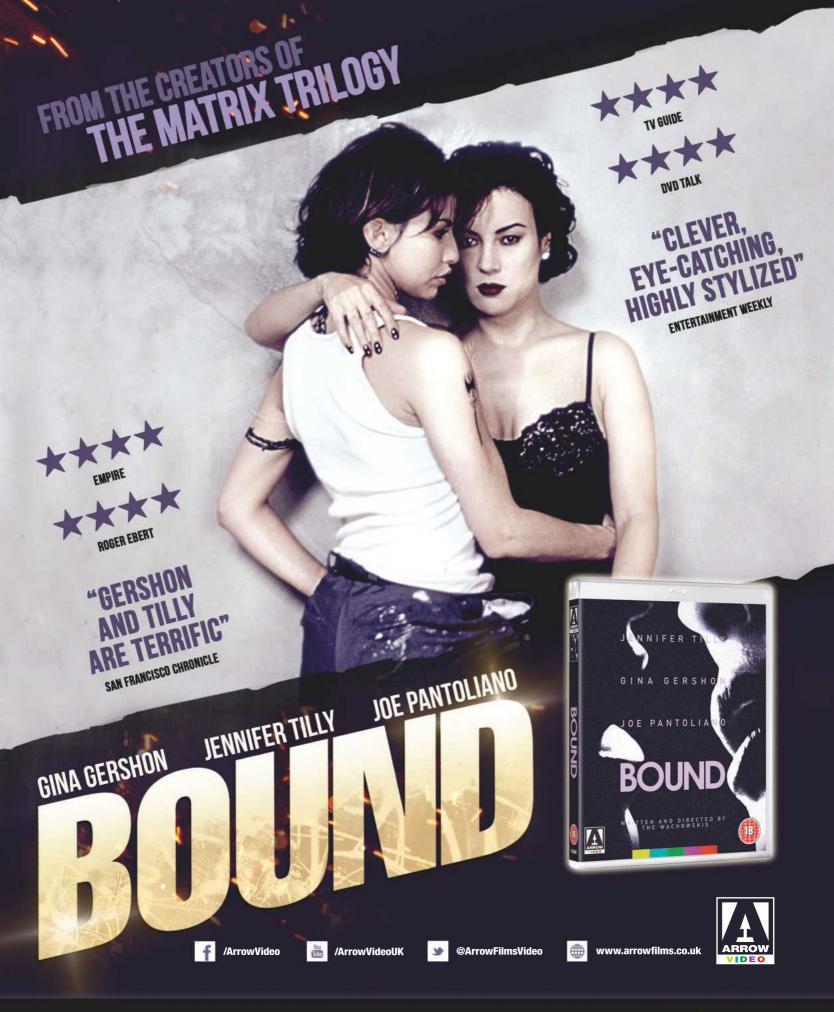
The install industry is gearing up for Atmos, too. Guy Singleton, of CI firm Imagine This, told *HCC* that his company is already some way through two high-end Atmos home theatres. 'They are proving challenging to design as the technology utilised is still very much in its infancy commercially, let alone at a private home cinema level.'

Singleton is sure it's the way forward, though: 'Ultra high resolution, fast frame rates and new sound formats are not only exciting industry developments, they allow us to deliver an experience that is even closer to that of the post-production facilities in which the movies are mixed. It's an opportunity to show our clients why they need experts like us to deliver luxury systems using state-of-the-art

technology. All in all, we are

very excited!'





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DIARY

Our calendar ensures that you don't miss out...

→ JULY

25: Hercules 3D
Brett Ratner steps behind the camera and Dwayne 'The Rock' Johnson in front of it for the second of this year's competing Hercules flicks. Will the son of Zeus reign supreme at the box office this Summer? Find out as he marauds around UK cinemas. www.paramountpictures.co.uk

27: Happy birthday Bugs! Today marks the 74th anniversary of the release of the *Merry Melodies* animated short A Wild Hare, considered by film historians to be the first official Bugs Bunny cartoon.



31: Guardians of the Galaxy 3D Marvel digs deep into its catalogue of lesserknown superheroes for this sci-fi epic which

partners Chris Pratt with a talking racoon. Hunt it down in 2D and 3D at a multiplex near you. www.disney.co.uk

→ AUGUST

06: The Inbetweeners 2 With 2011's *The Inbetweeners Movie* setting a new record for the most successful opening weekend for a comedy film at the UK box office, a sequel was inevitable. And here it is. www.entertainmentfilms.co.uk

11: Calvary Brendan Gleeson, Chris O'Dowd, Aidan Gillen and Dylan Moran star in this darkly comic murder mystery from writer-director John Michael (The Guard) McDonagh. Available to buy on both DVD and Blu-ray. www.entertainmentone.co.uk

The Expendables 3



Wesley Snipes, Antonio Banderas, Mel Gibson and Harrison Ford are among the new faces joining Sly and the gang for this third (and final?) outing in the explosive action series that hits cinemas today. www.lionsgatefilms.co.uk

15: The Wizard of Oz

MGM's musical-fantasy blockbuster starring Judy Garland received its Hollywood premiere at Grauman's Chinese Theatre on this date in 1939.

21: HCC #238

The next issue of your favourite home cinema magazine hits the stands today, packed with hardware tests, features, outspoken opinion and in-depth software reviews. www.homecinemachoice.com

CEDIA 2014 awards announced

UK firms dominate in annual celebration of Region 1's best installs

Custom install body CEDIA (the Custom **Electronic Design** and Installation Association) recently held its annual Region 1 awards bash, dishing out gongs to the AV professionals it's deemed to have done the most impressive work in the last 12 months.

And despite its geographic area covering the UK, Europe, Africa, the Middle East, India, Pakistan and the CIS countries, it was a triumphant night for firms from these shores.

In the all-important home cinema categories, it was a triple-win for UK companies. Doncaster-based ET Home Cinema won Best Home Cinema under £40,000 for 'Playroom

to Cinema', a compact theatre with eye-catching lighting, while Leeds/London/Cheshire firm Finite Solutions took top spot in the Best Home Cinema £40,000-£100,000 category for an installation dubbed 'What Lies Beneath', which offers seven-channel audio, seven luxury seats and a modern wood/cream décor. In the Best Home Cinema over £100,000, Buckinghamshire's Smartcomm triumphed with a stunning 18-seat dedicated room mixing state-of-the-art lighting and control with reference-level hardware.

Among further UK winners chosen by the judging panel (which includes HCC's very own Steve May) were London's Cornflake and Canterbury's

Philharmonic Audio Visual, with the former awarded both for Best Media Room under £15.000 and Best Showroom.

Entry overload

CEDIA revealed to HCC that the Region 1 awards attracted over 150 entries from 16 different countries. with additional categories including integrated homes, yachts, lighting, racks, innovation and energy management. There was also a dedicated hardware award,

for Best Innovative Product, which was given to the HDAnywhere Modular 4K, a Britishmade HDMI matrix with 4K support and HDBaseT.

'We could not have been more delighted with the exceptional quality of entries this year,' said Kris Hogg, chairman of CEDIA Region 1. 'All the projects which made the short-list demonstrated great integration at a system and design level as well as compliance with industry best-practice. The winners show an extra dimension in creativity, innovation and 'wow' factor that really sets them apart. Once again, the quality bar has been raised for the years ahead!'

Come back next month for an in-depth look at our favourite picks from the winners and finalists.

CEDIA's annual awards showcase the best in home cinema design

Wi-Fi audio receiver



Following hot on the heels of its BluDAC Bluetooth audio receiver.

Crystal Acoustics has introduced a new Wi-Fi model, Dubbed the WiDAC Wi-Fi Audio Receiver, this smallscale £60 box allows music streaming from a Wi-Fi device even when no Wi-Fi network is present (or via your Wi-Fi router), and claims a range of 100m. Offering onboard AirPlay/DLNA functionality, the WiDAC connects to your amp via either optical digital audio or analogue (from 3.5mm) and employs a Wolfson DAC. www.crystalacoustics.com

Anthem oh là là



Anthem AV Solutions has secured an exclusive UK distribution deal with high-end AV specialist Trinnov Audio. Known for its professional audio calibration/acoustics hardware, the French company recently launched a premium consumer range. Anthem will initially be distributing its ST2 HiFi speaker/room optimiser, Amethyst stereo preamplifier and Magnitude³² multichannel processor, with the Atmos/ Auro 3D-ready Altitude³² multichannel AV processor following in September. www.anthemavs.co.uk

Ultra HD bargain



Inexpensive Ultra HD TV is about to become a reality in the UK following the launch of two low-cost 4K screens

by Chinese manufacturer Seiki Digital. The 39in SE39UY01UK and 50in SE50UY01UK Ultra HD LED TVs are priced at just £400 and £600 respectively. However, before you get too excited, it's worth noting that neither model provides HDMI 2.0 connectivity among their three HDMI inputs or offers built-in HEVC decoding – which could make finding native 4K content to watch on them a little tricky. www.seiki.com

This month's top 10 news stories in handy, bite-sized chunks...



Pioneer and Onkyo to team up
Pioneer's domestic AV business looks set to be
acquired by Onkyo and a third party, Baring
Private Equity Asia, in a deal that will see both
the Pioneer and Onkyo brand names retained.
As the wordy corporate statement released by Onkyo
confirms: 'Pioneer Corporation, Onkyo Corporation
and Baring Private Equity Asia have reached a basic

agreement to commence discussions with an eye to integrating a part of the Home AV business operations between Pioneer and Onkyo.'

Damson exceeds target
Damson's Kickstarter campaign to fund production of its purportedly 'game-changing' Headbones wireless headphones surpassed its initial target of

£50,000 with ten days left to go. The innovative 'phones create sound by sending vibrations through the temporal bone straight to the inner ear. Sci-fi!

Mozilla's Chromecast rival
Rumours are rife that Mozilla – the free
software collective best known for its Firefox
web browser – is working with 'emerging
hardware manufacturer' aBitCool on a rival to
Google's Chromecast HDMI streaming stick. Mozilla
has been rather tight-lipped about its involvement,
but it does appear that the device is based around
web-based Firefox OS software.

Netflix cooks up a 4K high
Following up on a promise made at the CES
expo back in January, Netflix has expanded
its global portfolio of 4K content with the
addition of all 62 episodes of *Breaking Bad*. The
series has been remastered in 4K by Sony Pictures
Entertainment from the original film negatives.

Libratone connects to Spotify
Libratone has added Spotify Connect to its
Zipp and Loop wireless speakers. The feature
will come as standard on new kit and there
will be a software upgrade available for existing
owners. Users will need an active Spotify Premium
subscription to access Spotify Connect, although
a free 30-day trial is available for non-subscribers.

Game on for pirates

HBO's Game of Thrones has the dubious honour of having broken even more records for online piracy. At one point more than 250,000 illegal downloaders were sharing one Torrent file of the final episode of the latest season, while TorrentFreak claims that the episode was downloaded more than 1.5 million times in the 12 hours following its broadcast debut.

Linn rethinks Studio Master music distribution
Linn Records has responded to the growth in demand for hi-res audio by making its 24-bit
Studio Master content available through other digital music stores for the first time. At the same time, the Linn Records site will also stop selling recordings from other labels. '2014 is the year Studio Masters go mainstream,' predicts Linn MD Gilad Tiefenbrun.

Dynaudio names CTO
World renowned audio engineer Jan
Abildgaard Pedersen has been appointed the new
Chief Technology Officer at Danish audio manufacturer
Dynaudio. Prior to this appointment he had the role of senior manager, specialist in digital signal processing (DSP) at Bang & Olufsen.

Samsung drops plasma
Samsung has followed in the footsteps of Panasonic and Sony by announcing that it will cease production of plasma TVs (by November 30). Instead, the company will be focusing its high-end efforts on curved and Ultra HD screens. The last nail in the plasma coffin?

Sony streams games
A private Beta of Sony's PlayStation
Now videogame-streaming service has
launched in the US. The service allows
users of compatible Bravia sets (including all 4K
models) to play PS3 games on their TVs without the
need for a separate console. Games can be rented
for a period of one, seven or 30 days, and a variety
of pricing tiers will be tried during Beta testing. The
full service is expected to launch early next year.



PREMIERE

What's happening in the world of TV and films...

Saul spin-off delayed

There's good news and bad news about AMC's upcoming *Breaking Bad* spin-off *Better Call Saul*. While the network has already renewed the show for a second season, it's also delaying the first until 2015!

Predator gets rebooted

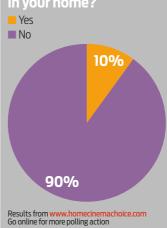


20th Century Fox has supposedly tapped *Lethal Weapon* scribe Shane Black to direct and co-write (along with Fred Dekker) a new instalment in the *Predator* franchise. As fans will know, Black already has a history with the series, having played the part of Hawkins in the 1987 original.

More ... Wars on the way

We're still over a year away from Star Wars: Episode VII touching down in cinemas, but that hasn't stopped Disney announcing that Gareth (Godzilla) Edwards and Josh (Chronicle) Trank will direct a pair of spin-off films. It is also rumoured that Rian (Looper) Johnson has been hired to direct Episode VIII.

WE ASKED... Do you currently use a wireless multiroom music streaming system in your home?





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Wising up to a wireless future

Last year it introduced its debut soundbar, now Denon has launched its first multiroom audio range. **Steve May** reports on an AV company that's moving with the times.



ONE OF THE world's oldest hi-fi brands is squaring up to one of the newest for a slice of the increasingly lucrative multiroom audio pie. This Summer, Denon will launch its HEOS wireless speaker brand worldwide, signalling a fundamental change of direction for the 104-year-old company in the process.

Until now, Denon (part of the D&M Group, home also to audio marques Marantz and Boston Acoustics) has been best known for its AV receivers and mini hi-fi kit. However, decreasing sales of traditional home entertainment hardware, and the rise of soundbars and new media products, have caused the brand to rethink its position. And having enjoyed considerable success with its Ceol line of streaming mini systems, the old man of hi-fi now has something altogether more evolutionary on the cards.

'The most profound change we've seen in entertainment is the consumer adoption of subscription music services,' CEO Jim Caudill told *HCC* at the Denon's Marbella product showcase. 'It's changed the landscape. This year there will be nearly 30 million paid subscribers for content services around the world. In 2010, that number was less than 10 million.'

No surprise then, he says, that traditional AV is under pressure. 'Fixed media formats such as DVD and CD are experiencing a global slowdown as the consumer reorientates themselves. But this

Denon's new HEOS range of multiroom speakers currently runs to a trio

D&M Group's CEO Jim Caudill says subscription music services have changed the AV landscape



is providing us with new growth opportunities and challenges...'

Of course the problem for Denon, along with plenty of other venerable AV brands, is that upstart Sonos has laid claim to this new generation of hi-fi. So is it too late to fight back? Caudill candidly admits that the multiroom audio phenomenon has almost exclusively been created by Sonos. 'It's a category which Sonos helped invent, and it's absolutely exploding around the world,' he concedes. 'We use the term multiroom audio, but what this really means is a basic platform to share and stream music around the house. People are really responding to that.'

10 years of tinkering

The technology that underpins HEOS by Denon (to give it its full suave branding) has been in development for over a decade, but it was only two years ago that the Denon thinktank began working on an action plan.

Unlike the Sonos MESH network, HEOS is built upon standard Wi-Fi (2.4/5GHz). The launch lineup comprises the £250 HEOS 3, which can be placed horizontally or vertically, and either stand or wall-mounted; the larger HEOS 5 (£350), which features four digital amps, plus custom-designed tweeters, midrange drivers and a passive radiator for improved bass response; and the flagship HEOS 7 (£500) which adds an additional channel of wallop, plus a headphone amp.

Although all are wireless table-top players, they also sport local inputs for aux and USB. If you add a USB drive to any of the speakers when networked, you can play back the contents across the entire HEOS system. Two HEOS speakers can be tethered to work as a stereo pair, so it's quite possible to use a pair of HEOS 3s either side of a TV, as a multiroomcapable quasi hi-fi/TV sound system.

Naturally HEOS, which is DLNA compliant, will also play music services such as Spotify (Connect), Deezer and internet radio, in either multiple zones

'Denon makes great play on the simplicity of the HEOS setup – and it looks a breeze to pair speakers and assign zones'

simultaneously, or individual zones as required. Control comes via a dedicated app.

More interesting still, the HEOS amplifier and pre-amp allows any loudspeaker and local source to be plumbed into the network. This means, for example, that the digital optical audio output of a TV could be routed around all zones.

Denon makes great play on the simplicity of the HEOS setup, and certainly it looks a breeze to pair speakers and assign zones. A 'Pinch to Play' feature on the control app allows multiple locations to be grouped together on the fly, should you want to rock the entire house. Got a big pad? Up to 32 HEOS units can be run on a single system.

Yet where HEOS really gets particularly interesting is with second-generation equipment, which *HCC* was told would include not only soundbars and soundbases, but also AV receivers. HEOS compatibility built-into an AV receiver would effectively reinvent multiroom audio, turning

The brand's new AVRs can pair with multiple Bluetooth devices

your cinema room into just another zone, and making all your AV components playable throughout the home.

One of the sonic benefits HEOS has over rival Sonos, we're told, is that the new system has dramatically more accurate synchronisation between zones, a result of proprietary low-latency technology developed specifically. DSP optimisation is via MaxxAudio licensed from Waves Audio.

AVRs unleashed

According to market research offered by Denon at its launch event, the AV receiver business is in terminal decline. Interest in audiophile two-channel music is also on the wane. However, the brand argues that there's still plenty of innovation to come in both categories. At the Marbella conference, it threw the spotlight on a fistful of highly-specified AV receivers, including three new 7.1-channel AVRs equipped with integrated Wi-Fi (as well as Ethernet), Apple AirPlay and Bluetooth aptX. One cool trick that all these receivers can perform is Auto Power On when the AVR is selected as the Bluetooth device; Bluetooth audio can also be sent to a second zone, with up to eight Bluetooth devices pairable.

The £400 AVR-X1100W is an entry-level receiver with five HDMI inputs, two of which are HDMI 2.0 4K-ready. It's joined by the AVR-X2100W, a £500 7.1 (rated at 150W, single channel, 6 ohms) design with eight 4K/60Hz compatible HDMI inputs and two outputs. For those looking for even more power, there's the £800 AVR-X3100W, rated at 180W per channel, with DTS Neo: X processing and an integrated 4K/60Hz scaler. All receivers are compatible with high-res audio files, including DSD and AIFF, and feature a highly graphical user interface and setup.

All these announcements (and the Dolby Atmos hardware, see p12) were made under the umbrella slogan 'Anywhere Sound Amazing'. It's difficult to imagine a more fitting mantra. Denon is on the move again ■

MULTIROOM MAYHEM...

The key players in the growing home hi-fi market

Sonos

The doyen of multiroom audio, Sonos's eco-system now comprises a trio of Play speakers, a subwoofer and even a soundbar (for home cinema japes). Key to its success has been its usability – plenty of streaming services are supported via its elegant desktop/phone app.

Pure

The Jongo line from the UK specialist currently ignores subwoofer or soundbar, focusing on desktop speakers (in a variety of colours). You can stream anything you want via Bluetooth, but using the Wi-Fi app gives owners more control.

AudioPro

This high-end multiroom offering from Scandinavia includes the LV33 floorstander (£1,300), plus a subwoofer, in addition to more traditional compact active speakers. The system uses a wireless transmitter to hook into your source – no direct streaming is offered.

Samsung

While its trio of M series speakers seem very much to be following the Sonos template, Samsung's multiroom proposition extends to its soundbars, Blu-ray players, home theatre systems and some TVs.



PUTTING PEDAL TO THE NEED ALL



Need For Speed takes the world famous videogame franchise and throws in old-school stunt thrills, rising star Aaron Paul and the most expensive things on four wheels. Director Scott Waugh explains why he thinks it reinvents the car culture movie



SCOTT WAUGH HASN'T

followed the most traditional of career paths. The son of a Hollywood stuntman, he entered the same industry in the 1980s, working on the likes of Speed, xXx and Mrs & Mrs Smith, and being president of the Emmy awardwinning Stunts Unlimited organization, before retiring from the bone-breaking business in 2005. Since then, via his own production company, he's developed advertising media with Electronic Arts for Battlefield 3 and Medal of Honor, helmed commercials for the US Air Force

and Navy, and released his directorial debut *Act of Valor* in 2012. However, it's probably safe to say that taking on the *Need For Speed* adaptation, under the eye of studio exec Steven Spielberg and with a \$66m budget, is a step up.

The Need for Speed games don't offer much in the way of a narrative – does that actually give you greater freedom for making a movie?

It does. But I think one of the things that was really great for myself about the games was, even though there's no narrative story, there's a particular style to each one, whether you chase cops, whether you race in certain areas or the types of cars you drive. What we wanted to do was combine all of the games, so that in the film we get to drive a huge variety of cars. You get to race them in a huge variety of places. And what really freed us up as filmmakers is we were able to bring a true heartfelt story to this crazy visceral world.

All the characters test themselves and how far they will push themselves and their moral integrity. To me, that's the great human component of the movie. I feel that the film has a tremendous amount of heart. Each character really opens up. The film is a metaphor for the racing culture, and the things that humanly we do to seek that thrill.

What else attracted you to the project?

After directing *Act of Valor* – and having been a stuntman – I wanted to do a car movie. I just felt like the time's right. I personally wanted to lend my expertise from all the car commercials that I've done into a movie, and the stars all aligned. And then I got a call from DreamWorks asking if I wanted to direct.

When DreamWorks approached me about making the film I read the screenplay and said to them, 'If you're interested in making a real authentic car movie like *Bullitt* or those old school, in-camera films with great characters, then I'm hopefully your guy.'

Why are racing movies exciting to audiences?

Because racing cars today is complicated for most people. It wasn't as complicated from the '70s and before, because the roads were vast, the populations weren't as dense, you could go to places pretty easily outside of the city limits and go race your car. But



now that the population is so massive, you've got to go far to try and race a car. And tracks have closed, or the tracks are really far away, and it's just hard. They don't really have that many point-to-point races like the Cannonball Run anymore. They still have the Cannonball going, but it's super private. They still have the quarter-mile tracks, but personally, that doesn't fascinate me. I'm more of a point-to-point course kinda guy. And this movie allows us to go there.

What we really strived for in the film was the chance for you to actually sit in the seat and open it up. Not to be a spectator and watch but to participate in the film and drive. Which is what's great about the video game. You get to drive the cars.

How did you chose the cars for this movie?

We chose the Mustang because we knew that the 50th anniversary was coming up. And it's a car that really represents American culture and its alliance with its designer, Carroll Shelby.

'If you're interested in making a real authentic car movie, then hopefully I'm your guy'

It represents modern muscle. It's always been a fast car. It's one of the few American cars that still travels at high speeds.

For some reason we [In the US] still always gravitate toward the muscle cars, we still gravitate toward the 1965 to 1972 cars, whether it's the [Chevrolet] Camaro, the [Ford] Mustang or the [Pontiac] GTO. And when we came to picking the cars that were going to race, I really wanted to find cars that hadn't been seen in a while that make us go, 'Oh, yeah. My friend had one of those in high school.' And you couldn't avoid certain cars like the Camaro. It's such a classic you've got to have it. And the Pontiac GTO. They're so cool. The one car that we really spent time on trying to find that would represent [lead character] Tobey Marshall was the Grand Torino. It was a '68 Grand Torino. We went through and we looked at all the body styles and

24 NEED FOR SPEED



I just felt it's so classic and it's so cool and it really kind of defines that Tobey Marshall is different. He's a different guy and this car is different.

And some of the greatest cars come from Europe, and they're the fastest — one of the things that's fun about this movie is you get to watch the supercars race, which is the McLaren F1, the Bugatti Veyron, the Koenigsegg Agera R, the GTA Spano and the Lamborghini Sesto Elemento. All of those are multi-million dollar cars.

You had to construct some of these yourself...

There's only a few of them in the world and they're not really camera-friendly! You're not going to drill into the side of a two-and-a-half million-dollar car. And you're not gonna wreck it. They're art pieces. That's what everyone forgets. These cars are art pieces. You're not gonna wreck *The Mona Lisa*, you know what I mean? You're gonna replicate it to wreck it so the real one is still there.

The action in *Need for Speed* feels very real — the stunts are practical and not CG. Was that easy to accomplish?

We had this situation where the character Benny flies a helicopter over the streets of Detroit. And because of the way that a helicopter is, it's really hard to photograph. And the way Benny's character needed to look, the only way to really get a close-up on it was to stand outside on the skids. I didn't have the time to try and rig something for like six hours to get a camera out there. I just said, 'Let me put a harness on, I'll stand out there and film it myself.' And we

I was able to get the camera into positions that most people can't just because of the safety factor that comes with that, but I am lucky enough to have had so much experience growing up with my father and being able to hang off the skids of a

Wherever possible, Waugh tried to do practical stunts to capture Need For Speed's action scenes

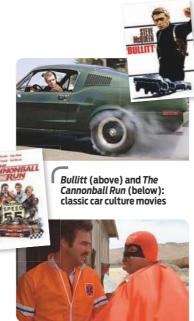
helicopter to get shots. I just want to put the camera in unique places so people can see it differently. It's really important to me.

Some would argue that I could do that in CG. In post. Just green screen it. I have a problem with that. There's this subconscious thing in humans, I think, that you know what's not real. I can't even tell you what it is either, but I just think it's innate in us to call it fake. But most of the time we don't care. We're just along for the ride. But I think when you're trying to do something for real, if you ingest a little bit of green screen, it's a big red herring. You can see it because everything else in the movie's real, so you all of a sudden know that it looks different.

And one thing that we really wanted to do, and we spent an exorbitant amount of time on, was jumping the Mustang in Detroit. We wanted to do the biggest jump possible, but practically. And we had to land it and drive away. It was really important, and we spent so much time trying to find a spot in Detroit. And we found it and it jumped 194 feet and it went over three lanes of traffic. And I think it's fantastic in the movie. It's definitely real. And it's just one of those things that I think is plausible. You could drive away from that, because we did.

In *Need for Speed* you offer subtle tributes to other famous car-racing movies...

For me, growing up with *Smokey and the Bandit*, and those kinds of movies, they were influences in my filmmaking career. I wanted to do subtle throwbacks to my favourite car movies. It might be just camera angles that I chose to use or certain cars or certain things to wreck. And I think if you watch the movie and you've watched all these previous films, you're going to catch them. They're good throwbacks to that era and they happen quick. I don't belabour those moments. You really have to pay attention because they can go by in about two seconds. But I think they're really fun.



got the shot in about 20 minutes.

How did you arrive at casting Aaron Paul as Tobey Marshall?

It was great to actually get him in this movie. We were looking to cast the character of Tobey and we were looking for a young and up-and-coming actor. We found somebody that we liked and [DreamWorks'] Steven Spielberg wanted to see who we were going to surround him with. Ronna Kress, my casting director said, 'Well what about Aaron Paul for Dino, the bad guy in the movie?' Personally, I don't watch much television so I asked, 'Who is Aaron Paul?' She just kind of laughed at me. 'He's in Breaking Bad.'

My father's a huge *Breaking Bad* fan, so I called him and said, 'Do you like this Aaron Paul kid?' He said: 'Oh, he's unbelievable.' I asked Ronna to show me some tape and I was blown away. This kid is amazing. I said, 'Forget Dino, why don't we consider him for Tobey?'

I guess Spielberg watched Aaron Paul's tape and the first thing out of his mouth was, 'Wow, this kid is great. Why don't we consider him for Tobey?' I got that word back and I was so thrilled because Steven and I have really seen this movie eye-to-eye the whole time. And that was it. Twenty-four hours later we put the offer out to Aaron. I was really praying that he would want to do something like this because it's definitely a departure from how we've known him in *Breaking Bad*.

One of the things that I struggled with when casting Tobey was I just kept having this fixation on Steve McQueen. I felt like there really hasn't been, in today's world, a young Steve McQueen. There's a bunch of terrific actors but not somebody who really harnesses that strength of not needing dialogue, and has presence on screen and a true physical talent. Steve McQueen was a rugged, handsome man. But he wasn't a model. His persona made him sexy, and we really wanted to find that character and then find that actor. And we struggled for many months and when I saw Aaron Paul I knew he was the guy.

So was McQueen's character in *Bullitt* the inspiration for Tobey Marshall?

One of the great things about Steve McQueen was that he was a racer. He was an actor, but more importantly he was a racer and it's something he breathed and lived his whole life. I felt like the Tobey character was a young Steve McQueen and he really was that guy.

You can see it in Steve's work when he did *Le Mans*. This is my speculation, but Steve really just wanted to race Le Mans. The only way he could figure out how to do it was he got a studio to fund a movie that would support his racing efforts. And I think that's just a testament to how much passion he had towards racing and that's Tobey Marshall in our movie. He lives and breathes that sport and he can't really see anything else.

Bullitt brings us to San Francisco, one of many locations used in your movie...

It's kind of a funny thing about San Francisco — all the greatest car movies have been shot there. And I

was really adamant about going there, because I just felt like this is a great way to pay our respects. And, as I said, it's one of those subtleties you'll see in the movie that's a throwback to the greatest car movies of all time.

What made you decide to film in Detroit?

When you look at the map of the United States, if you're going from New York to California, where are you going to drive through? Technically you would blow through Chicago. But we said, we've got to go through Detroit, because it's where cars were born. We figured out a plot device to make sure our guys go through there. Photographically, Detroit is unbelievable. It's got this palette that's just ripe and rich and the textures are so unbelievable. The city unfortunately is in financial ruins, but for photography it's amazing and what a great city to rip through in a car.

We also went to the Bonneville Salt Flats [In Utah] because again, like Detroit, it's one of the most influential and pure representations of auto-speeding. The Bonneville Flats is to me, the most monumental and historic spot of any car culture. All speed records have been broken there with cars, and I couldn't think of a better place to shoot. Unfortunately, we happened to go there at one of the few times that it's been flooded. It was pretty, it was gorgeous — but we didn't get to walk on it...

And the location in Moab, Utah, may be familiar to some moviegoers, too.

Yeah. There's a part where the helicopter picks up the Mustang and flies off the ridge. And one of the most cinematic car moments I remember was from *Thelma and Louise*, and that end-shot freeze-frame. It just freezes. You see the hair blowing and all—it's an amazing shot, and I wanted to go where that was filmed. It's called Dead Horse Point. It's unbelievable. It's really dramatic and picturesque. That's why I wanted to go to the real locations, because you can't cheat Moab anywhere else. I think it's one of the eight wonders of the world.

What do you hope viewers will get out of watching Need For Speed?

I hope audiences get out of this movie what they don't expect. I think that's a wonderful thing that can happen in a theatre, where you go to see a movie expecting one thing and it completely throws you another way, in a really good way. You leave satisfied, because it wasn't what you were expecting. I hope Need for Speed does that because we really tried extremely hard to make something different, that wasn't expected.

One of my mottos in pre-production was 'Don't replicate. Reinvent. Make it the same but different, so it's new and it feels fresh.' And that was hard, but I think when you see the cameras and the way we move it and the way the characters' arcs are, it's definitely a reinvented car culture film

Need for Speed is available to buy now on 3D Blu-ray, Blu-ray and DVD courtesy of EntertainmentOne. See p96 for our review

THE CAR'S THE STAR

We pick our five favourite automobile adventures

Ronin

This French-set thriller starring Robert de Niro and Jean Reno lifts its rather humdrum plot by featuring an astonishing BMW vs Peugeot chase sequence through Paris. Shame the BD release is an MPEG-2, bare-bones affair.

The Italian Job

The iconic crime caper from the tail-end of the swinging '60s doesn't bother with muscle cars, preferring to see its gang use Mini Coopers to outwit the Italian police. Pick up the crisp-looking 40th Anniversary Blu-ray release.

Mad Max 2



Cars, motorbikes and armoured trucks do battle during the thrilling final act of director George Miller's violent, post-apocalyptic sequel. Grab the entire trilogy in the limited edition petrol can packaging for a BD-shelf showpiece.

Gone in 60 Seconds

Not the tepid 2000 remake starring Angelina Jolie but the 1974 original, which features probably the longest chase sequence (interspersed with frantic media commentary) in cinema history. And the Blu-ray is nice and grainy-looking, too.

The Drive



Walter Hill's 1978 genre classic is so stripped-down it's less of a movie, more of an experience, but at its forefront are the astonishing car sequences, delivered with a lean, mean, realistic aesthetic. Read the BD review on p103.

Home cinema

Which sort of visual system do you go for? Projector and screen, or plasma, LCD or LED TV? 3D or non-3D?

Choosing a home cinema system is a potential minefield that must be negotiated with great care or safely avoided by letting experts guide you. If you want to end up with a system that, as a minimum, meets your expectations in terms of picture and sound quality, reading magazine product reviews and choosing the recommendations, five-star favourites or best buys can only ever be part of the answer at best. Looking for the cheapest price and having a system delivered to your door, even with a 'knowledgeable' friend to help set it up, is a well-trodden path to disappointment.

There is a bewildering choice of components on the market today and also different ways in which components can be installed and connected together. Which sort of visual system do you go for? Projector and screen, or plasma, LCD or LED TV? 3D or non-3D? Full 1080p capability is now the only sensible choice but the appropriate source components, such as a Blu-ray player, need to be part of the equation.

The sound performance of a system is also hugely important, even more so if you will be listening to music, or music DVD's, through the same system. If so, you need an amp that approaches the performance

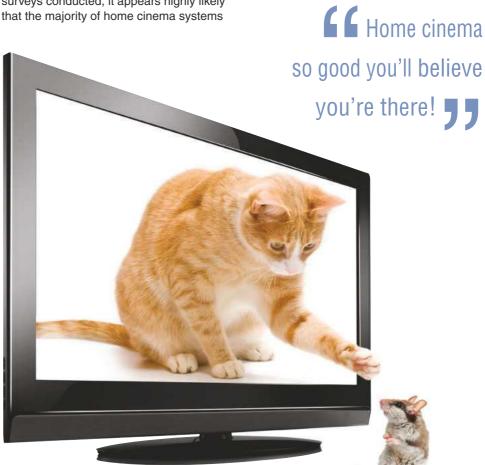
Selecting and installing home cinema on a DIY basis may leave the system performing at way below its optimum level.

of a decent 2-channel hi-fi amp, which is not that easy to find. Having an amp with the right inputs for the best connectivity is essential but you will also need to decide on a 5.1 or 7.1 speaker system, passive or active sub and, crucially, where they will be sited for the best results. In short, it's complicated and very fertile ground for getting it wrong.

Achieving potential

To select a system, you could choose a collection of 'Best Buy' components in the hope that they will be a great combination. Maybe, but probably not. You could buy a pre-packaged all-in-one system from one manufacturer. This is almost certainly not the best route either, as you will miss out on enormous potential. From informal surveys conducted, it appears highly likely that the majority of home cinema systems

selected and installed on a DIY basis (that is without professional input) are performing at way below their optimum level. To compound matters, most are also ill-matched to the room in which they are installed and are, in reality, the wrong system. Without considerable knowledge or experience, high quality home cinema is not a suitable DIY activity. Our aim must be to buy a home cinema system that will provide an excellent picture quality plus an audio delivery that will match, or even better, the commercial cinema experience. It must be exciting, reliable and deliver true value for money.



Confused?

What and Where to buy

To ensure a home cinema system is right for you, where do you start? Here's an important tip ...don't start with WHAT, start with WHERE. There's only one way to give yourself the best chance of getting it right first time, and that's through a specialist AV dealer. It's possible you have preconceived ideas that put you off visiting one. Although you would welcome the advice and guidance, you don't know the technical jargon. You don't want to be talked down to. Your friend has said they only sell expensive gear and they're not interested if you don't have a big budget. They're expensive. These are just myths.

Most specialist AV dealers are running their business because, above all, home cinema is their hobby. They spend a large portion of their time comparing systems to get the best possible results. They know the component combinations which don't gel together and, conversely, they know the combinations which give the best performance within a given price range. Very importantly, they know how to get a system working to its optimum. But they all also know the system must suit you.

Buying or being sold to

There are dealers around, web based or otherwise, who will sell you anything you are willing to pay for. They may be a bit cheaper but that's all they offer. Now there's a carefully selected group of longestablished specialist dealers who are totally committed to putting the customer first. Their idea of 'selling' is to discuss your requirements, offer their advice, give you the best options, then play the systems for you and allow you to be the judge. You'll probably be surprised and, almost certainly, relieved to discover how easy it is to see and hear the differences between components and between systems. You'll be able to make a clear and informed decision about what to buy.

The story doesn't end there. These shops won't abandon you once you've put your hand in your pocket. They won't leave you to set up the system you've selected as best you can. They'll install it in your home, make sure it performs to its best, and ensure you're entirely happy with the way it works. Why? Because a high proportion of these dealers' custom comes through people who have bought from them before, either directly or by recommendation. It's vital to them to get it right for you.

Getting the best deal

Unless you've got money to burn, you'll be living with your new system for years. Most of these dealers offer much longer equipment guarantees than provided by the manufacturer, a very worthwhile benefit, but it also makes it in the dealer's interest to ensure high build quality and reliability. Maybe you could save a few pounds by buying piecemeal but you'll lose out on the overall package. As far as the dealers are concerned, they believe that taking care of their customers properly is a far better way of doing business than just handing over boxes.



The Dealers listed below have been selected because they are known to do an excellent job in guiding customers towards home cinema systems that will provide years of superlative performance and total satisfaction.

Our Top 20 AV shops in the country

SOUTH

Chelmsford

RAYLEIGH HI-FI SOUND & VISION

216 Moulsham Street. 01245 265245 www.rayleighhifi.com

Kingston-upon-Thames

INFIDELITY

9 High Street, Hampton Wick. 020 8943 3530 www.infidelity.co.uk

Maidenhead

AUDIO VENUE

36 Queen Street. 01628 633995 www.audiovenue.com

Norwich

MARTINS HI-FI

85-91 Ber Street. 01603 627134 www.martinshifi.co.uk

Rayleigh, Essex

RAYLEIGH HI-FI SOUND & VISION

44a High Street. 01268 779762

CUSTOM INSTALL DEPT.

01268 776932 www.rayleighhifi.com

Southend-on-Sea

RAYLEIGH HI-FI SOUND & VISION

132/4 London Road. 01702 435255 www.rayleighhifi.com

Tunbridge Wells

KENT HOME CINEMA

69 London Road, Southborough. 01892 535007 www.kenthomecinema.co.uk

LONDON

Ealing

AUDIO VENUE

27 Bond Street. 020 8567 8703 www.audiovenue.com

N1 GRAHAMS HI-FI

190a New North Road. 020 7226 5500 www.grahams.co.uk

SW11 ORANGES & LEMONS

61-63 Webbs Road, Battersea. 020 7924 2040 www.oandlhifi.co.uk

MIDLANDS

Coventry

FRANK HARVEY HI-FI EXCELLENCE

163 Spon Street. 024 7652 5200 www.frankharvey.co.uk

Nottinghan

CASTLE SOUND & VISION

48/50 Maid Marian Way. 0115 9584404 www.castlesoundvision.com

Solihull

MUSIC MATTERS

93-95 Hobs Moat Road. 0121 742 0254 www.musicmatters.co.uk

NORTH

York

SOUND ORGANISATION

2 Gillygate. 01904 627108 www.soundorg.co.uk





The majority of the above dealers are members of one or both of the major trade organisations, BADA or CEDIA.

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VERDICT ***				

...Talk to the experts

'Oh, and it comes with a cinema room'

The developers of this new-build property knew a dedicated cinema room would wow potential buyers. Mark Craven is already wondering if he should put in an offer





THIS BASEMENT MOVIE den in South West London is the work of custom installation professionals MD Integration, and is slightly unusual in that it was commissioned by the developer of the property rather than the owner. In the capital's red-hot housing market, it should certainly help the six-bedroom new-build stand out from the crowd.

As installer Paul McDonnell explains, there were two rooms in the basement – one for a gym and the other for a cinema. 'They wanted a professional home cinema that would wow potential buyers, making the best use of the room. They didn't want five ceiling speakers and a TV – they wanted something that was very creditable but not ridiculously expensive.'

The specified kit is commensurate with those demands, mixing a 7.2 speaker array from Artcoustic (a mixture of on-wall monitors and in-ceiling models. 'I love the size of the range,' says Paul) – with largescreen images via a mid-range JVC DLA projector and custom-made 3.2m screen.

The speakers were chosen after a demonstration at Artcoustic's UK HQ. 'The clients had never installed a home cinema to this level before,' reveals Paul. 'We took them to the showroom to give them an idea of what they could get for different budgets.' And not only were they impressed enough with the audio quality of the Danish-made cabinets, they were swayed by the performance of the JVC PJ in Artcoustic's demo room.

Driving the setup is an Anthem MRX500 receiver; the brand's ARC software was used to EQ the setup. However, with the twin rows of sofas due to be removed when the eventual owners of the property move in, the installer will return to do another sonic calibration once the room's furniture and fittings have been finalised.

A Pioneer BDP-450 disc player caters for hi-def content, while control is handled by an RTI processor/handset.

Digging deep

The initial planning phase threw up one requirement that involved some traditional elbow grease – the developers didn't like the idea of walking in and having to step up to the rear row of seating. 'To avoid this, at the construction stage the front of the room was excavated down,' explains the installer. 'So you walked in at floor level to the upper tier and stepped down to the lower tier.'

Other than that, the install from design through first and second fix to the finished room was plain sailing. 'We were fortunate enough to have a client that got us in early to discuss the cinema, took our advice and got a magnificent result without any real problems,' reports Paul. So the lesson for all of us is clear — if you're ever building a house, make sure you plan for a home cinema from the beginning...

30 PRO INSTALL



INSTALL INFO

A POLISHED PIXELS
A ceiling-mounted JVC DLA-X500R fires at the 3.2m 2.35:1 ratio projector screen. This HCC Best Buy-awarded videochucker offers extensive calibration tools and effective HD uprezzing via the brand's e-Shift technology

B You're surrounded

A quartet of in-ceiling speakers provides the surround channels in the cinema's 7.2 array

CDON'T GET TOO COMFY

The two-tier seating, using traditional sofas rather than cinema recliners, will naturally be replaced by the eventual owner's own furnishings – and another calibration will be undertaken to ensure optimum sonics

D TAKING CONTROL

Operating the AV system is achieved via this RTI handset, in conjunction with the brand's XP6 processor

E Danish drivers

The on-wall Artcoustic speakers employ six midbass drivers and a trio of tweeters. The cabinets are used for the LCR soundstage

F SINGING THE ANTHEM

An Anthem MRX500 AV receiver processes audio and video. A $7 \times 100 \text{W}$ design, it provides advanced roomEQ courtesy of the company's ARC system





Serious Home Cinema















demands some
Serious AV Separates





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Blu-ray Player
and SC LX 57
AV Receiver

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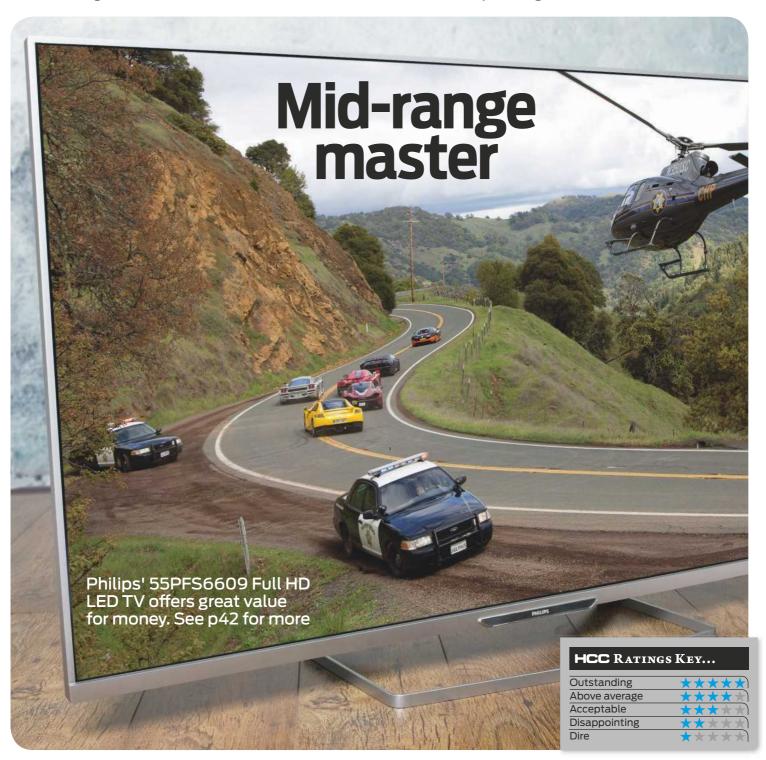
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REVIEWS

→ HARDWARE HIGHLIGHTS PANASONIC TX-50AX802 second-gen 4K TV and DMP-BDT700 Blu-ray player YAMAHA £500 7.2-channel AV receiver DYNAUDIO Revamped Excite 5.1 speaker array PRIMARE Premium-grade home cinema amplifier PHILIPS Fidelio E5 2.1 system CANTON High-end Bluetooth soundbar ROUNDUP Five Smart TV systems go head-to-head AND MORE!



Panasonic's Freetime 4K/Ultra HD flatscreen is a qualified sensation, enthuses **Steve May**

Sweet and sour second-gen 4K TV

PANASONIC'S CLAIMS THAT it could emulate the image quality of its plasma screens with 4K LED TV tech were met with some scepticism when made at CES. After all, the brand's PDPs have been routinely lauded over the years for their deep blacks, excellent shadow detail and naturalistic colour fidelity.

But on the evidence of this 50 in AX802 (also available in 58 in and 65 in screen sizes), maybe the hyperbole isn't too far off the mark. While we've yet to see a production-ready version of the brand's full-LED array AX902 flagship, due later in the year, this edge-lit precursor is pretty darn impressive, particularly when it comes to colour fidelity and black level. Panasonic really does seem to have cooked up a secret sauce for its next-gen UHD LED TVs, although one surprising ingredient could leave a bitter aftertaste...

The TX-50AX802 may look slight but it's surprisingly hefty for a 50-incher, tipping the scales at 24kg. The stand mechanism, a counterweight positioned behind the panel, cleverly creates the illusion that the TV is resting on nothing but its somewhat wispy metal-finish frame – it's a clever trick. And the TV may have a regulation thin bezel but it's still able to hold a camera that automatically stands to attention when required for Skype

or facial recognition duties.

Viewing options are many and various. The screen boasts dual Freeview and Freesat tuners and has four HDMI connections (one of which is v2.0 and supports 4K/60p content), not to mention a high-frame-rate compatible DisplayPort for games PCs. There is also a trio of USBs, Ethernet, integrated Wi-Fi and a 4K-compatible SD card slot.

The TX-50AX802 ships with two remotes. The main IR controller is an extremely well-made unit with a neat metallic finish, while the Bluetooth Touch

Pad has a built-in microphone for voice interaction. There's also a cluster of on-body menu controls to the rear right, if you need to get physical.

The feature spec is indulgently generous. A combination of roll-back Freetime EPG and proprietary my Home Screen and My Stream platforms ensure plenty of Smart functionality. Other niceties include display mirroring from compatible Miracast smartphones and TV Anywhere remote sharing, which allows users to watch live broadcasts remotely, or access recordings located on an attached USB drive. (see our Smart TV grouptest on p50 for more)

Wot? No Netflix?

Onto to that slight niggle. The Panasonic TV features an HEVC decoder, but unfortunately this doesn't mean that it's compatible with the nascent Netflix 4K service, owing to an undisclosed chip issue which prevents certification. The brand admits this mistake can't be rectified through firmware. Indeed, Panasonic's *faux pas* could be a deal-breaker for those who envisage Netflix to be their prime source of 4K content in years to come.

Image quality is excellent, with only minor caveats. The $3,840 \times 2,160$ IPS panel delivers fabulous levels of fine detail with 4K source material, and exhibits a high level of contrast. Colour fidelity is similarly head-turning.

The screen's black level performance is positively stygian, giving plenty of depth and punch to its pictures. Panasonic's engineers have clearly been instructed to push for the most plasma-like blacks they can muster.







36 REVIEWS



The edge-lighting itself is a little uneven, resulting in some visible bloom during extremely dark scenes. The screen boasts Panasonic's range-topping 2000Hz BLS (backlight scanning) rating and utilises Local Dimming Pro technology, which does seem to do odd things with some near total black detail. Uma Thurman's uncomfortable burial in *Kill Bill: Vol 2* (BD), sees her body pulsating in the blackness, when in reality there should only be the merest fidget of shadow detail evident.

Image presets include THX Cinema and Bright Room, True Cinema and Professional 1 and Professional 2. A surprisingly high number of these make the screen look exceptionally dull and are best avoided. If you want the panel to really ping (in a good way), my suggestion is to fine-tune the image to

'If you're wondering if there is a visual benefit to 4K when viewed on a 50in display, the answer is "Yes!"'

taste from the Normal preset instead – start by using a Pluge pattern to set black level and edge Sharpness down to remove edge-ringing.

Movie fans will be pleased to note that the set has a Dimmer function, which turns down edge-lighting above and below the aspect ratio letterbox for optimised blacks/contrast.

Other processing options include Intelligent Frame Creation motion smoothing. This was a cinematic mood killer on the brand's plasma models, but here seems rather more watchable. The Minimum setting maintains moving detail, and suffers only negligible artefacting, making it a good choice for sports. The Mid and Max IFC settings punish motion with more obvious artefacts, typically seen as edge smudging around certain moving objects.

The AX802 supports Active Shutter 3D and comes with two pairs of battery-powered glasses. There's some crosstalk double imaging if you're determined to look for it, but the 3D works well and colour performance is not adversely affected. 3D gets a bad rap, but on UHD screens it's found a natural home. I'd argue that 3D upscaled to 4K offers a viewing experience that's brighter and more engaging than that typically had in a commercial theatre.

If you're still wondering if there is any visual benefit to 4K when viewed on a relatively small 50-incher, the answer is a resounding: 'Yes!'. To assess the set with native UHD,

I touted Panasonic's DMC-GH4 camera, which shoot's MP4 H.264 2160/30p and MOV at 2160/24p, around London and captured busy scenes in 4K. The image quality gleaned from this footage was stunning.

The set also looks sensational with next-gen games. Bungie's *Destiny* on the PS4 rewards in terms of fast-moving detail and colour vibrancy. As you scrabble to avoid the various melees, it's impossible not to be distracted by the sheer beauty of the planetary landscapes. It's easy to forget that you're not watching genuine UHD imagery.

It's worth noting that while Blu-rays look fine when up-rezzed, the AX802 doesn't seem able to impart quite the same amount of nuance when upscaling from a tuner. Pictures are good with no overt pixel structure, but they just don't have the illusory depth seen on some rival models.

Sonically the set surprises with an energetic performance, although it is largely monophonic. Most of the wallop comes from a rear-facing 10W woofer, augmented by two downward-firing 4W speakers enlisted to add some high-frequency detail and width.

A 50in temptation

So Panasonic's TX-50AX802 is a premium 4K panel that, for the most part, doesn't disappoint. This TV is beautifully designed and image quality is mesmeric. While it doesn't look like a Panasonic plasma in terms of picture, it clearly cherishes some characteristics of its forebears. Colour richness is striking and there's enormous contrast and depth to its pictures. Native 4K content is absolutely divine — which makes the absence of Netflix 2160p keenly felt. At least YouTube 4K works. The price tag is also on the right side of temptation

On the menu



→ Beyond the colourful Smart menus, Panasonic's 4K set offers copious picture tweaks as well as a raft of presets, including THX Cinema and Bright Room

SPECIFICATIONS

3D: Yes. Active Shutter 3D
4K/ULTRA HD: Yes. 3,840 x 2,160
TUNER: Yes. 2 x Freeview HD; 2 x Freesat
CONNECTIONS: 4 x HDMI (3 x v1.4; 1 x v2.0);
Scart, component/composite video via adaptor;
3 x USB; Ethernet; integrated Wi-Fi; optical
digital audio output; Cl slot
SOUND: 18W (2 x 4W +10W)
BRIGHTNESS (CLAIMED): N/A
CONTRAST RATIO (CLAIMED): 'Supreme'
DIMENSIONS (OFF STAND): 1,131(W) x 673(h)
x 42(d)mm
WEIGHT (OFF STAND): 24kg

FEATURES: THX 4K certification; USB HDD recording; 2,000Hz Intelligent Frame Creation; Hexa processing engine Pro; media server playback from USB and network; Advanced Colour Spectrum; TV Anywhere; My Home Screen; My Stream; Studio Master Drive; Miracast screen mirroring

HCC Verdict



Panasonic TX-50AX802 → £2,100 Approx → www.panasonic.co.uk

→ Tel: 0844 844 3899

HIGHS: Deep blacks and vibrant colour;
upscaled HD impresses; Freetime roll-back EPG;
My Home Screen UI; deceptively clever design

LOWS: No support for Netflix 4K; some
edge-light blooming; some local dimming





Projectors

From 1080P to 4K, UHP and LED we have projectors from Sony, JVC, Epson and Optoma.

Do you know which one suits your needs, by considering all the options:

ANSI and native contrast
Manual and auto iris
lumen output
throw distance
room conditions
screen choice





Audio

Dolby Atmos is coming to the home soon. Have you considered all your audio requirements, i.e. AV receiver, speakers, positioning, cable etc

From inwalls to floor standing speakers, we have speakers to suit all needs, alongside the processing power of the likes of Anthem, Denon, Onkyo etc

Do you want to hear the movie or feel the movie? We have transducers and actuators that mean you feel the bass as well as hear it, making the experience feel 4D...



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Adrian Justins lets this affordable AVR take control of his digital audio lifestyle

Taking on all-comers

THE £500 AVR market is more competitive than the sprint down the Champs-Élysées at the end of the Tour de France. These days, it's no good simply offering multichannel decoding and amplification with the odd DSP mode and a raft of HDMI sockets. No: you have to spread the love and get your AVR to cosy up to all the other technological toys that are stuffed with entertainment content, including smartphones and servers. And the best way to do that is *sans* wires.

Yamaha has more than made up for being a tad late to the Wi-Fi party by allowing its new RX-V577 to get its wireless tentacles into a number of connected services, including vTuner internet radio, DLNA streaming, AirPlay, HTC Connect and Spotify Connect. Yet proving that you can never have your cake and scoff it, absent from the mix is Bluetooth, although you can plumb in an optional Bluetooth receiver, at a cost of £50.

Another major AVR asset these days is an app for controlling your kit using a phone or tablet. Yamaha's AV Controller has been rather good for a few years, keeping the pace with the likes of Pioneer in terms of slickness and usability, and is a big part of the RX-V577 story. Other important chapters in the tale include: HDMI 2.0 connectivity with support for 4K/ Ultra HD 50Hz/60Hz signal passthrough; support for wireless/USB streaming of FLAC, WAV and ALAC formats up to 24-bit/192kHz with gapless playback; and assignable amplifiers for bi-amping or Zone B use. And, of course, being a Yamaha, there is no shortage of DSP modes to recreate the experience of listening to the New Year's Day concert in Vienna or simply for optimising the listening experience according to the genre of movie or TV show being watched. All in all, a healthy roster of features that makes the RX-V577 a compelling proposition in the down-and-dirty £500 arena.

Design-wise, the RX-V577 is nothing to write home about. It's inoffensive enough from across a room and has a nice legible dot matrix display, but its random scattering of sockets and buttons leaves a bit to be desired. Nor do you get the feeling that its the most solid of home theatre components around, but that's expected in this market.

At least the layout of sockets around the back is decent, with everything logically grouped. Build quality of speaker terminals and the casing is reasonable, considering the price, but removing the caps from the terminals to fit banana plugs requires considerable strength and care not to damage the plastic. Gratifyingly, there are two subwoofer line-outs, whilst the amp also boasts a bass boost feature for setups using small speakers. Clearly, the RX-V577 is intended for use in small-to-medium-sized living rooms or home cinemas (although the YPAO Reflected Sound Control setup process is apparently able to detect speakers up to 24m away from the mic).

Smooth operator

Lack of Bluetooth aside, Yamaha's wireless implementation is highly impressive, and includes Wireless Direct, which allows you to stream music directly from a phone or tablet in the absence of a wireless router, as well as allowing full control of the amp using the app. Particularly good with the latter is the 3D room >





40 REVIEWS



layout graphic that lets you pinch to resize the sound space, and the EQ graphs that let you tweak parameters such as reverb, delay and 'liveliness'. The app also recreates all of the features of the bundled handset and its display is infinitely preferable to the AVR's own onscreen GUI, which wouldn't look out of place on a Sinclair ZX Spectrum. Using the app also avoids having the menu appear over whatever you're watching. So, basically... use the app.

WPS pairing avoids the hassle of inputting passwords; HTC Connect serves users of HTC phones and AirPlay does likewise for iOS devices. You'll need a premium Spotify account to take advantage of Spotify Connect.

DLNA execution is top-notch with full folder structure visible in connected drives and seamless, gapless playback of standard-res

'The RX-V577 is a versatile home cinema beast, offering seven amp channels and countless DSP modes'

and hi-res tunes. Other niceties include the Scene button on the remote, which quickly powers up the HDMI CEC-connected components required, say, for watching a movie (TV and BD deck). Worth setting up.

Virtual insanity?

As for its core home cinema duties, the RX-V577 is a versatile beast, claiming to even be able to produce virtual seven-channel surround sound from just two or three front speakers (a big idea in Europe, we're told). Cinema DSP 3D provides a wide, high and dense soundfield from audio sources with a virtual presence speaker producing what is oddly called 3-dimensional sound. There's nothing virtual about the YPAO installation, a rapid-fire method of setting the speakers using acoustic reflections. It is not foolproof, though, it got all the distances correct for my rig but made errors with the speaker sizes.

Quite a sparse back-panel, but will you really care that S-Video inputs have gone missing?

Performance-wise, the amp's streaming audio ability is nowt short of superb. It's a doddle to find and select hi-res audio from a NAS drive, and 96kHz/24-bit ALAC and 192kHz/24-bit FLACs played with consummate refinement through a set of Q Acoustics Q7000 speakers. The bass in Bob Marley's Could You Be Loved is tighter than Scrooge's purse strings, whilst Susan Wong's vocals in Desperado, like the piano's higher octaves, are exquisitely delivered with precision and energy. The Yamaha's sound is terrifically clean; like its Pioneer VSX-924 rival, some may consider it a tad too clinical, lacking a bit of warmth.

The same qualities apply to the RX-V577's multichannel movie delivery. Happy days are here again with Ron Howard's F1-biopic Rush, revealing every last detail in the DTS HD-MA soundtrack pumped through a regular 5.1 system. At the start of the Japanese Grand Prix, carefully-placed noises such as cars revving off to one side, rumbling thunder in the distance, heavy rain bucketing down and rain drops plopping delicately onto the tarmac all have a delicate yet defined effect. Like its 2013 predecessor, this is an AVR that loves finding the details in a soundmix. It's equally adept with high-intensity action, such as fast accelerating cars passing in an acoustic arc to match their movement across the screen. Screeching, blistering tyres and close ups of pistons going like the clappers are all powerful yet intelligible. A £500 thriller? Indeed.

The amp has more DSP modes than James Hunt had dolly birds, and I'll admit that while many will steer clear, these have their uses with broadcast material. For example, I found football benefitted from the Sports mode by emphasising commentary in the centre channel.

Overall then, the RX-V577 is worth considering purely based on its home cinema sonics. The fact that it's enjoyable to operate (especially via the app) and makes a decent audio streamer is the icing on the cake. However, the absence of Bluetooth is, as Mary Berry would say, the soggy bottom ■

On the menu



→ As with many modern AVRs, the graphical user interface doesn't do justice to the slickness offered elsewhere, using a basic environment of white text and black backgrounds. The AV Controller app, pictured, is a better tool

SPECIFICATIONS

DOLBY TRUE HD: Yes. Plus Pro-Logic IIx; Dolby Digital EX; Dolby Digital Plus MASTER AUDIO: Yes. Plus DTS ES Matrix 6.1; DTS Discrete 6.1; DTS Neo:6; DTS

96/24 HX: No MULTICHANNEL INPUT: No MULTICHANNEL OUTPUT (CLAIMED): 7 x

115W (1kHz, 0.9% THD, 8 ohms, one channel) MULTIROOM: Yes. Zone 2 AV INPUTS: Yes. 4 x composite; 3 x digital audio

(1 x optical and 2 x coaxial) HDMI: Yes. 6 x inputs; 1 x output (HDMI 2.0)

VIDEO UPSCALING: Yes. To 4K COMPONENT VIDEO: Yes. 2 x inputs; 1 x output **DIMENSIONS:** 435(w) x 161(d) x 315(h)mm

ALSO FEATURING: iOS/Android control apps; vTuner internet radio; Wi-Fi; Wireless Direct AirPlay; HTC Connect; Spotify Connect; DLNA compatible; Ethernet; USB; binding-post speaker terminals; 2 x subwoofer line outs; bi-amplification; lip sync; Scene feature; Cinema DSP; Virtual Presence Speaker; Compressed Music Enhancer; numerous DSP modes (7ch stereo, Vienna Hall, Cellar Club, Roxy Theatre, Sci-Fi, Adventure, etc); media playback including hi-res FLAC, WAV, and ALAC files; FM/AM tuner with RDS; 3 x analogue stereo phono inputs; composite video out; 12V trigger; headphones jack; YPAO room EQ

HCC Verdict



Yamaha RX-V577

→ £500 Approx → uk.yamaha.com → Tel: 0844 811 1116 **HIGHS:** Powerful, clean audio performance; flexible wireless audio streaming; good smartphone app control; tons of connections LOWS: Primitive onscreen graphics; Bluetooth not integrated; not the warmest of sounds



THEY SAID THAT IMMERSIVE SOUND AT HOME WAS IMPOSSIBLE

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Great looks and a strong performance at an aggressive price win **John Archer** over to this Philips TV's cause

A big picture at a small price

IN 2014 PHILIPS appears to be focusing on value. As well as securing a seemingly popular berth in Argos with some seriously affordable entry-level models, the brand is out to woo more discerning but cash-conscious viewers by aggressively pricing its mid-range sets. This 55in LED TV, for instance, costs only £1,000.

Thankfully, the 55PFS6609 doesn't look cheap. In fact, with a gorgeously high-quality aluminium frame wrapped around the screen and its glossy white rear, it's one of the prettiest TVs I've seen so far in 2014. Despite not being curved...

Of course, it doesn't exactly hurt the 55PFS6609's aesthetics that it's equipped with Ambilight, where LEDs down its left and right sides throw out coloured light that can be matched with remarkable tonal and positional accuracy to the content of the image you're watching. To live with Ambilight for any amount of time is to not want to live without it again, even with this two-sided iteration (a four-sided version graces high-end sets)

Network-savvy

Connectivity on the 55PFS6609 is strong, with four HDMIs, two USBs, and the usual Ethernet and Wi-Fi network options. The USBs support playback of a wide variety of multimedia file formats, while the network options support both DLNA streaming from connected devices and access to the latest Philips Smart TV online platform.

This platform is improved from 2013's rather ropey effort. It runs much less sluggishly for a start, despite using more complex and high-resolution graphics, and it's upped its content levels a bit so that highlights now include Netflix, BBC iPlayer, BBC Sport, BBC News, Blinkbox, Spotify and YouTube. However, the continuing lack of any 4OD, Demand 5, ITV Player and Amazon Instant Video support – together with the fact that its

The 55in Philips comes with a stylish white remote



built-in content recommendation system seems to work with only a very limited number of potential sources — means it's still only a B-lister in Smart terms. Philips does at least seem to be moving in the right direction, but it's doing so rather slowly.

Presumably as part of its bid to be more aggressive on price, Philips has fitted the 55PFS6609 with its second-tier Pixel Precise HD processing system rather than its top-tier Perfect Pixel HD system. This is a pity given that I've consistently found the top-level system to deliver superior motion processing and noise reduction. But Pixel Precise HD is nonetheless an extremely powerful tool in the context of the TV world, delivering key elements here of a 400Hz-emulating motion compensation system (made up of a combination of a native 100Hz refresh rate, frame interpolation and backlight blinking); multiple noise reduction systems; and various modes for boosting sharpness and contrast.

In fact, the quantity of picture adjustments the 55PFS6609 provides is so extensive that it can make it a bit tiresome to use, particularly as some of the processing elements can do more harm than good. For instance, I'd suggest not using the noise reduction or sharpness boosting systems at all, at least with HD sources, and urge extreme caution with the motion and colour processing options, leaving both only on their lowest-strength settings if you don't want pictures to start looking overly molested. In fact, you may not want to bother with the HD Natural Motion system at, all given that the

55PFS6609's native pictures aren't especially susceptible to LCD's motion-blur problems.

The Sharpness of Smaug

This motion clarity plays a significant part in the TV's most noticeable picture strength: its exceptional sharpness when showing HD. The strikingly crisp transfer of the treasure halls in *The Desolation of Smaug Blu-ray* is done full justice; in fact, the quality of Philips' picture engine is such

that you'd be forgiven for thinking at times that you were watching a picture containing more than the $1,920 \times 1,080$ pixels it offers.

Also helping the 55PFS6609 stand out from the crowd is an intense brightness and colour vibrancy to its imagery. This extremely potent look is down in part to the employment of a direct LED lighting system, rather than the more common edge-mounted approach, and the effect is so powerful at times that pictures look almost luminous. Naturally, this makes the set a good option for a bright

'Helping this Philips stand out from the crowd is an intense brightness and colour vibrancy to its images'

room, as well as injecting gorgeous life into Peter Jackson's consistently rich-toned fantasy world.

The worry with a picture as bright as this is that black level response will take a bath, even more so as Philips doesn't apply a local dimming engine to the direct LED lighting. But mercifully, while it's not a classic black level performer, this 55in mid-ranger isn't the contrast disaster zone I'd feared. During the murky Spiders of Mirkwood sequence, for instance, there is a slight grey wash hanging over the darkest parts of the screen, but it's not severe enough to make the scene seem unconvincing — especially as the screen proves unusually good at reproducing shadow details in dark areas, giving the picture a sense of depth equivalent to that seen with bright content.

Also showing that the 55PFS6609's contrast performance is no mug is the way the TV manages to retain good vibrancy with



colours during darker material, largely avoiding any 'wash out' when handling low-lit content.

There are three serious gripes I have with the 55PFS6609's 2D images. First, the sharpness I mentioned comes with a little noise attached, as well as some slightly forced edging around Bilbo during some of Desolation's most contrast-rich images. Second, as hinted earlier, you have to spend time revisiting the TV's menus if you want to

continually get the best picture results with different sources – something that the brand's rivals generally avoid. Third, my input lag measurements recorded a figure of 100ms, which makes the 55PFS6609 a problematic screen for serious gamers.

It is still strong overall with 2D, though. Alas, the same cannot be said of its 3D performance. At first glance all looks well, with the searing colour and brightness doing a great job of countering any dullness introduced by the active 3D glasses. And the Philips' sharpness works well at making the 3D world feel dense and real. However, all this good work is totally undone by vast quantities of crosstalk ghosting. This was so widespread and aggressive throughout the 3D version of The Desolation of Smaug (which features lots of largescale vista shots tailor-made to throw up crosstalk if a display is susceptible to it) that it made the film pretty much impossible to watch.

I can end on a positive note with the Philips' audio. This TV combines an open-sounding performance from its speakers with more bass than I'm commonly used to. This low-end did distort a bit when trying to reproduce some of the deepest Smaug-induced rumbles, but generally it contributes well to a solid all-round sonic display.

Nearly, but not quite

It's impossible not to feel a bit frustrated by the Philips 55PFS6609, as it limits its audience a little with its poor 3D and laggy gaming performance. Many, though, will not be bothered by either of those things and can't afford the (still considerable) financial step up to a good 4K screen. With that in mind, this glamorous-looking 55-incher is probably a bit of a bargain. It trades the last word in deep blacks for vibrancy and colour punch, but its HD visuals will still put a smile on your face

On the menu



→ Philips' menu system has been retweaked for 2014 and is easier to navigate, but note that this set doesn't feature the Android Smart platform that was announced at CES – we expect those screens to surface in the Autumn

SPECIFICATIONS

3D: Yes. Active
4K: No. 1,920 x 1,080
TUNER: Freeview HD
CONNECTIONS: 4 x HDMI; component video;
composite video; RGB Scart; 2 x USB, integrated
Wi-Fi; Ethernet; RF input; CI slot; stereo audio
output

BRIGHTNESS (CLAIMED): 350cd/m2 CONTRAST RATIO (CLAIMED): N/A DIMENSIONS (OFF STAND): 1,231(w) x 715(h) x 54(d)mm

X 54(0)111111 **WEIGHT:** 17.4kg

FEATURES: Pixel Precise HD processing; Smart TV features including Netflix, BBC iPlayer, Blinkbox, YouTube and internet browser; two-sided Ambilight; Ambilight + Hue support; direct LED lighting; Micro Dimming Pro system; 400HZ motion rate; installation wizard; My Remote app with Simply Share for mobile devices; media file playback from DLNA & USB; Miracast

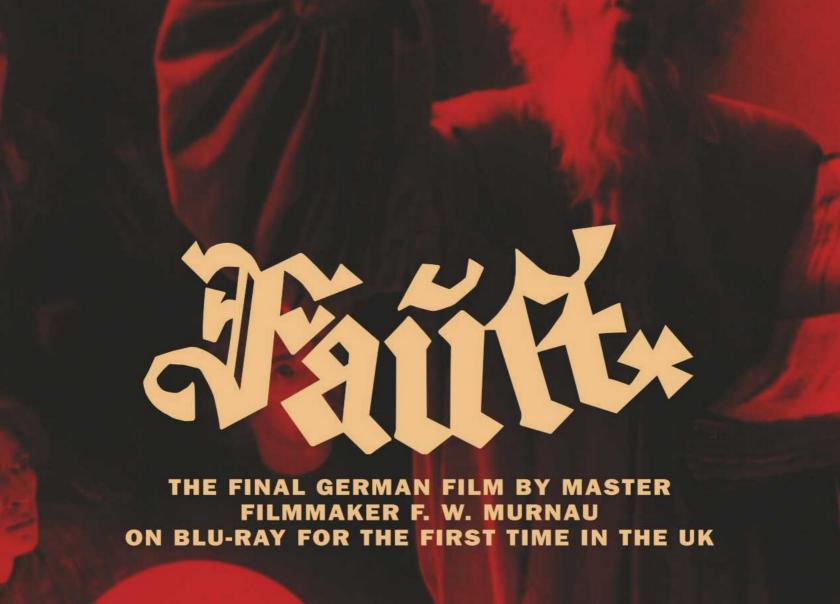
HCC VERDICT



Philips 55PFS6609

→ £1,000 Approx → www.philips.co.uk → Tel: 0800 331 6016 **HIGHS:** Stunning good looks; bright, colourful, detailed pictures; decent sonics; strong value **LOWS:** High input lag; horribly ghosty 3D; subwoofer occasionally distorts; second-tier Smart platform







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46 DYNAUDIO EXCITE 5.1→Approx £5,000



Danny Phillips runs the rule over Dynaudio's revamped Excite multichannel array and wonders if its classy construction is matched by sophisticated sonics

Dynaudio hopes to Excite again

LIKE THORIN OAKENSHIELD in *The Hobbit*, Dynaudio's latest Excite speaker range is on a quest. In this case, to unite the armies of high-end and budget audio buyers to defeat the dragon of bad sound quality. These speakers are designed to sound great with any partnering kit, from entry-level amps right up to reference gear.

Dynaudio hopes to achieve this in a couple of ways. Firstly, the sonic characteristics of Dynaudio's tweeters and mid/bass drivers – all of which have been developed and built in-house in Skanderborg, Denmark – allow them to deliver sound quality that's, I'm told, 'virtually independent' of the amplifier used. Secondly, their high impedance (8 ohms) and avoidance of impedance drops means they should work well with medium-powered amps and receivers.

This new incarnation of the Excite range comprises four models – the X34 and top-end X38 floorstanders (£2,000 and £2,850 per pair respectively), the £620 X24 centre speaker and the compact X14 bookshelf (£900 per pair). We're using a pair of X34s, a pair of X14s and the X24, plus the £1,550 Sub 600 woofer.

The speakers comes in lacquer and real-wood veneer finishes. The more contemporary lacquer finish is available in black or white, while your wood options are Walnut or Rosewood. Dynaudio sent the Rosewood version, which looks suitably classy and distinguished.

The X34 is a handsome if unremarkable floorstander. Dynaudio hasn't tried anything clever or look-at-me with the cabinet, sticking with a classic box shape, although the tapered front corners break up the straight lines. Anyone worried about the impact of these floorstanders on carpet space can rest assured that they're relatively slim and discreet, measuring 950mm tall by 170mm wide.

Build quality is superb. Lift one up and there's a satisfying heft to the cabinet, and all the bits and pieces are firmly bolted together. The lacquer finishes no doubt add an extra sense of luxury, but the wood veneer's matt texture is pleasant to the touch. The cabinet can sit on four resonance-absorbing feet or adjustable spikes.

The X34s come with a cloth grille held on by hidden magnets, giving them a clean, minimal look. Peel them off, however, and the old-school wood finish is attractively juxtaposed by silver driver surrounds, peppered with screws that create an industrial vibe.

Unsurprisingly at this price, the X34s offer bespoke technologies. The driver array comprises two Magnesium Silicate Polymer (MSP) mid/bass cones with lightweight aluminium wire voice coils, above which sits a specially-coated fabric dome tweeter. Identical driver technology is employed in the X24 centre, except the dual mid/bass cones flank the tweeter in the horizontally aligned cabinet. There's an integrated metal base that angles the speaker upwards towards your ears. Again, build quality is exemplary and the slender cabinet shouldn't cause installation headaches. The X14 is the most compact Excite speaker to date. Basically a mini-me version of the X34s, it's designed to sit on a tabletop or the optional 3X stand.

Rounding off the system is the Sub 600, which isn't part of the Excite family but offers a blockbuster spec and similarly smart design.

A sealed enclosure weighing 21kg and built like a tank, it's Dynaudio's most advanced woofer, partnering its 12in forward-facing driver with a 300W amplifier. Getting it hooked up in a home cinema environment is a doddle, with the LFE input joined by a phase switch, plus gain and crossover dials. It also doffs a hat to two-channel setups where processor-based bass management will not be an option by





The chunky binding posts on all the speakers ensure cables fit nice and tightly

offering full bandwidth input and a high-pass filter to cut off low frequencies at 60Hz or 80Hz, before passing the audio signal on via its 'SAT' speaker output. There's also an LFE output for daisy-chaining additional subs.

Filling the room

After rigging up the Excite system to an Onkyo TX-NR818 — not a high-end receiver by any stretch but equally no slouch in the power department — it does indeed deliver impressive results. This is a refined, effortless listen, taking blockbuster soundmixes like *The Desolation of Smaug* in its stride. Its sound is fast and detailed with a crisp leading edge, and it musters a big room-filling soundstage when the material demands it.

The riotous 'Orc Attack' chapter is the perfect showcase for the system's talents. In the build-up, orcs creep across the rooftops and their gentle footsteps are audible thanks to the speakers' terrific detail and sensitivity, while Bolg's subtle growl is similarly lucid. When they launch their attack, the 'thunk' of feet landing on wooden floors sounds solid and realistic. Every effect is delivered with clarity and conviction, from creaking floorboards to snarling orcs, and as Tauriel and Legolas start slicing up their assailants, the metallic chink of their blades is incisive.

The powerhouse subwoofer plays an integral part, layering every sound with deep bass. There's plenty of slam, demonstrated

every time an orc crashes through the roof – the crunch of splintering wood is bolstered by a fast, forceful bass punch.

It's also seamlessly integrated and gels everything together. This lends authority to dialogue, particularly the Necromancer's – his menacing voice is locked to the centre of the front stage while the tweeters tease out the sibilance and ethereal effects.

Switch to a bigger scene and Excite's sense of scale makes it easy to suspend disbelief.
As Smaug stomps around the caverns of

'This is a refined effortless listen, fast and detailed and able to muster a roomfilling soundstage'

Erebor you'll really believe his size and heft, thanks to the subwoofer's convincing treatment of his footsteps and bellowing roar.

Surround presentation is also impressive – effects from the X14 surrounds are clean and precise, and the echoes that ring out around the hall create an amazing sense of space and distance. As the dragon passes while the dwarves cross the bridge, the swooshing noise and its throaty gurgle sweep between channels with a smooth, consistent tone.

However, I do feel the Excite array could do with more bite and dynamism to bring the excitement levels up a notch. It has a highly enjoyable sonic character, but even with my eager-sounding Onkyo it's a tad reserved.

Is its sound more suited to music? I dusted off a 48kHz/24-bit DVD-Audio disc of a terrific Japanese jazz album called *Variations* by Atagiin, skipped to the stunning 5.1 mix of What The World Needs Now Is Love and luxuriated in this system's expressive presentation and confident staging. The sax and oboe solos are cleanly separated and precisely located, while crystal-clear surround information placed me right in the middle of the performance. The full-bodied double bass that plays the song's timeless melody is pinned to the centre and accentuated by the fine pluck of the strings, while gorgeous piano chords and delicate brushed drums drift gracefully around it.

Cost considerations

Another concern is the price. This 5.1 array packs a sparkling performance, but having heard, for instance, Monitor Audio's £2,800 6AV12, I didn't really perceive the huge step up in quality I expected from a system costing over £2,000 more. So, in short, Dynaudio's new package sounds delightful, with a measured and balanced output, but falls short of Best Buy status

SPECIFICATIONS

EXCITE X34 FLOORSTANDERS

DRIVE UNITS: 2 x 5in MSP mid/bass drivers; 1 x lin coated fabric dome tweeter ENCLOSURE: Bass reflex FREQUENCY RESPONSE: 37Hz-23kHz SENSITIVITY: 86dB POWER HANDLING: 200W DIMENSIONS: 170(w) x 929(h) x 270(d)mm

EXCITE X24 CENTRE

DRIVE UNITS: 2 x 4in MSP mid/bass drivers; 1 x
lin coated fabric dome tweeter
ENCLOSURE: Bass reflex
FREQUENCY RESPONSE: 55Hz-23kHz
SENSITIVITY: 84dB
POWER HANDLING: 150W
DIMENSIONS: 500(w) x 145(h) x 210(d)mm
WEIGHT: 8kg

EXCITE X14 SURROUNDS

DRIVE UNITS: 1 x 5in MSP mid/bass drivers; 1 x 1in coated fabric dome tweeter ENCLOSURE: Bass reflex FREQUENCY RESPONSE: 50Hz-23kHz SENSITIVITY: 85dB POWER HANDLING: 150W DIMENSIONS: 170(w) x 285(h) x 255(d) mm WEIGHT: 6.5kg

SUB 600 SUBWOOFER

DRIVE UNITS: 1 x 12in woofer ENCLOSURE: Sealed cabinet LOW FREQUENCY RESPONSE: 22Hz-200Hz ON BOARD POWER: 300W REMOTE CONTROL: No DIMENSIONS: 350(w) x 370(h) x 420(d)mm WEIGHT: 21kg CONNECTIONS: Stereo phono input and output; LFE input and output

HCC Verdict

Dynaudio Excite

→£5,000 Approx → www.dynaudio.com → 01353 721089 **HIGHS:** Excellent build quality; polished sound with crisp detail; deep, seamlessly integrated bass; impressive scale and speed **LOWS:** Could be a little more attacking; more affordable rivals also impress



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SMART TVs HAVE been around longer than you may remember – it was back in 2009, five years ago, that the concept of what was then known as a 'Widget TV' first broke cover, driven by a collaboration between Yahoo! and Samsung. However, in the intervening period, much has changed. Net-delivered content is no longer a walled-garden affair, with thirdparty apps and video-on-demand services being the major draw. These content platforms are increasingly joined by features such as gesture and voice control, touchpad handsets, programme recommendation systems, integrated social media experiences, smart device screen mirroring and interaction, and advanced, searchable electronic programme guides.

But with every major company now offering Smart TVs, choosing which system is right for you is no easy task. While all share similar features (BBC iPlayer and DLNA media streaming, for instance) their approaches vary considerably, as does their user interface design and level of customisation on offer.

In this grouptest, we round up the Smart platforms of the five big UK TV brands, so you can make the right choice whether you're a social media maestro hankering for sleek Twitter integration, or a telly addict demanding the widest range of content.

LG SMART+ TV WITH WebOS

The Korean brand begins again from scratch...

PANASONIC FREETIME WITH MY STREAM

A 'rollback' EPG is among the highlights here

SAMSUNG SMART HUB

Can the Smart innovator keep its top-dog status?

SONY ENTERTAINMENT NETWORK

The new Discovery Bar functionality impresses

TOSHIBA SMART TV CLOUD

Does its straightforward approach succeed?

A fresh approach

LG goes back to the Smart drawing board with its WebOS platform – and you'll be glad it did



RATHER THAN JUST incrementally adding features to an old Smart TV portal, LG has started again from scratch. This transpires to be a very smart thing to do. The brand's new WebOS user platform, available on the 950V, 850V, 730V, 650V and 630V models, is far more than a cosmetic refresh of what's gone before. It's nothing less than a revolution in TV interface design.

Flagged as 'making TV simple again' there's some heavy science at work behind the scenes. WebOS, or to give it its full awkward monicker LG Smart+ TV with WebOS, is based upon a portable multi-tasking operating system devised by Palm and acquired lock stock and barrel from Hewlett Packard.

Intuitive simplicity is key to its appeal. The WebOS launcher is actually nothing more than a horizontal bar of slanting coloured tiles, albeit ones which offer instant access to streaming services, broadcast TV and other functionality, such as a web browser or EPG.

You can tell almost immediately that WebOS screens are smarter than the rest. From the gently encouraging installation and tuning procedure, guided by LG's Bean Bird mascot, to the uniform use of fonts throughout (typography nerds might be interested to know these are Miso and Museo), the user interface is uniquely beautiful. While rivals remain sternly utilitarian, there's something playful and knowing about LG's new Smart playground.

It's not just cosmetics of course. LG has made an art out of source switching. Suddenly

you can use streaming services like overthe-air ones. Viewers can watch iPlayer or YouTube, pause and flick over to live TV, and then return and carry on with their stream. This even works with a high bandwidth Netflix 4K stream if you're viewing on a UHD set. Similarly, if you want to switch from Netflix to YouTube and then back again, the WebOS TV will pick up exactly where you left off. Rival Smart TVs require you to exit and then reopen apps to do the same thing.

Once you've tried this level of seamless input switching, you don't want to live without it. The number of streamed services that can stay active at one time is determined by the category of TV you buy; higher-end models have more resident memory.

Onboard video services include BBC iPlayer, Amazon Prime Instant Video, Now TV, Demand 5 and YouTube.

The launch bar itself is fully customisable. You can prioritise services and functions by grabbing them with the cursor and dragging them to the front of your queue. You can also call up a list of things you've been watching recently.

Beyond the launcher there are other areas of webby interest. The LG Store is a bit of a misnomer, as it also offers content recommendations. It's from here that premium services, such as Skype and Blinkbox, can be downloaded to the launcher.

LG says it's optimistic about providing new third-party apps, courtesy of an open SDK for developers. Of course, rapid growth could bring pitfalls. WebOS currently has no way to group apps, and the launcher itself works best with a relatively small selection on the main screen.

The WebOS platform is also the only one where a Bluetooth pointer seems perfectly natural. The latest LG Magic Remote offers effortless navigation around the UI, with perfectly judged sensitivity and control. Naturally, there's a standard IR remote supplied but the WebOS platform is clearly optimised for Magic.

Network and USB file playback options covers all the key codecs and containers. I successfully played AVI, MKV, MOV and MP4 video files from a networked NAS and USB stick (using an LG 47LB730V). Audio support proves more restrictive, with just MP3 and WAV co-operating. The platform also supports screen mirroring from compatible smartphones.

In short, it's rather groundbreaking ■

SPECIFICATIONS

CATCH UP TV SERVICES: BBC iPlayer, Demand 5, YouTube, Now TV MOVIE STREAMING SERVICES: Netflix, Amazon Prime Instant Video, Blinkbox, Now TV VOICE CONTROL: Yes MOTION CONTROL: No. But you do get the Magic Remote MEDIA PLAYBACK (USB/DLNA): supports MKV, MOV, MP4, AVI, MP3, WAV ADDITIONAL FEATURES: Skype, Miracast screen mirroring, smartphone/tablet app control; guided installation

Catching up on catch-up TV

By integrating Freetime technology, Panasonic's latest Smart sets are perfect for telly addicts



IF YOU'RE ONE of the millions who has become a catch-up TV obsessive, then Panasonic's new Freetime-enabled Smart TVs with roll-back EPG could prove irresistible.

Available on the AX802, AS802, AS740, AS650, AS600, AS520 and AS510 models, Freetime first debuted on Freesat's premium satellite TV set-top boxes, but has now been adapted to work with terrestrial Freeview TV. The service simplifies the act of watching catch-up, doing away with the need to fire up individual channel apps. Instead you use the

'Panasonic's Freetimeenabled Smart TVs could prove irresistible to catch-up TV obsessives'

EPG to scroll back over the past week to find shows available for streaming. Only enabled channels allow the guide to go backwards, but BBC iPlayer, ITV Player, 4OD and Demand 5 are supported.

Freetime has obvious telly addict appeal, but there's more to Panasonic's Smart platform. The brand's My Home Screen interface has been a firm HCC favourite since its debut, and provides a convenient hub for services and functionality you value. TVs come with a selection of preset My Home Screens, including one dedicated to the

Freetime TV guide, with an On Demand shortcut, programme search and curated content Showcase. If you don't like any of the presets provided you can create your own. It's a snap to add preferred hot buttons to this. If you want landing-page access to Netflix and iPlayer, place them first; if you want to stream files from a NAS, just add the media server app.

Panasonic has a wide range of content providers onboard, including Vimeo, BBC News & Sport, Wukai.TV and Dailymotion. There's also Skype for video calling and display mirroring through compatible Miracast 'phones.

Rather more unusually, a wide selection of Panasonic's connected TV range (AS650 screens and up) also support TV Anywhere remote sharing. When used with the TV Remote 2 app, this lets you watch live broadcasts remotely via the 'net or even access recordings from any attached USB drive on your home network.

My Home Screen is joined by My Stream (AS600 models upwards) – a curated torrent of thumbnails reflecting TV shows of interest, plus YouTube and VOD content. The My Stream recommendation engine is influenced by a 'Star' icon on the Bluetooth touch controller supplied with some of Panasonic's televisions. Just 'Star' shows you like.

New for 2014 on the high-end AS802 and AX802 screens is the Info Bar. Only active when the screen is in standby, the Info Bar is triggered by a heat proximity sensor and when activated flashes up time, weather and message info. The system goes off reliably

SPECIFICATIONS

TIME

Smart TVs

CATCH UP TV SERVICES: BBC iPlayer, ITV Player, Demand 5, 40D, BBC News, BBC Sport, **MOVIE STREAMING SERVICES:** Netflix, Vimeo, Dailymotion, Wuaki.TV VOICE CONTROL: Yes MOTION CONTROL: No MEDIA PLAYBACK (USB/DLNA): MKV, MOV, MP4, AVI, WMV, MP3, AAC/M4A, FLAC ADDITIONAL FEATURES: Info Bar, Skype, Miracast screen mirroring, smartphone/tablet app control

whenever anyone walks near to the set, and makes a little fanfare in the process.

Screens with a built in-camera can utilise face-recognition technology to identify up to six Info Bar users, which in turn enables it to display more personalised content. You can, incidentally, view the recommended content Streams of other users, which may or may not be a good thing.

The Touch Pad controller has an integrated microphone, offering a medium level of voice interaction.

Multimedia playback support is solid, both from local USB as well as a networked drive. Using a Panasonic TX-65AX802 I unspooled a good range of files including MOV, AVI, WMV, MPG and MKV. Audio support covers WMA, MP3. AAC/M4A and FLAC.

Panasonic has done a remarkable job finetuning the usability of its Smart platform, and the addition of Freetime is inspired

Aiming to please

Voice and gesture control, casual games, VOD and more – Samsung's Smart Hub is fully-loaded



SQUAD BBC iPlayer, ITV Player, 40D and Demand 5 are all onboard

SAMSUNG GRABBED AN early lead in the Smart TV app race through the simple expedient of stuffing its portal like a suitcase after a weekend shopping in downtown Gangnam. The idea clearly seemed to be to replicate the smartphone experience on a TV. Of course, that's not how anyone actually uses the telly, so the platform, available on its Series 6, Series 7, Series 8 and Series 9 TVs, has been refined quite a bit since then – although it can still feel a bit overwhelming.

Today's Samsung interface is essentially a carousel; spin it for the functionality you need. The landing page comprises a live TV window surrounded by current broadcast programme choices. These provide a channel snapshot, but you can't filter the selection.

From here you can navigate through a selection of themed pages, each signposted with a simple graphic. The Samsung apps page is awash with entertaining diversions (Dailymotion, Toons TV, Tunein radio to name but three) plus Smart functionality services (Skype, web browser). Options can be filtered by What's New, categories and Most Popular. A Films and TV Shows slate tempts with thumbnail art of recent releases (*Frozen*, *The Lone Ranger*) plus back-catalogue content (*Luther*, *The Big Bang Theory*), which link to third-party pay-per-view streaming services.

There's also a 'trending' window which presents fullscreen tweets from what appears to be a largely random selection of TV shows. A timeline thumbnail TV guide is influenced by viewing preferences.

Interestingly the brand has decided to court the casual gamer this year with an entire slate dedicated to the art of thumb-twiddling. Just don't expect *Flappy Birds* here. More innovative is a split-screen Multi-Link screen feature on those higher-end Quad Core Plus sets that can support it; this allows you to mix live footage with web pages and an On TV programme guide; alternatively you can split screen between live TV and app content.

Overall usability is high, with virtually all iterations proving responsive to browse. Samsung hasn't undersold the value of fast processing; even entry-level Smart sets now employ Quad Core silicon.

If you have a large collection of disparate file types on NAS devices, you're in luck. Support from USB and networked devices is pleasingly comprehensive, with a good selection of video file types playable including AVI, MOV, MKV and WMV; audio compatibility covers WAV, FLAC, MP3 and WMA.

System control options are dependent upon the screen range you buy into. However, you don't need to spend a fortune to obtain surprisingly sophisticated control. Samsung's mid-rangers ship with both a standard IR remote and a Bluetooth Smart Touch Control. The latter combines a touch-sensitive pad with integrated mic for voice control. You can bark into the controller to change channel and volume or open and control apps. It's a nicely designed doofer with reassuringly few buttons.

At the higher end of the Samsung screen line you'll get gesture control, which is now

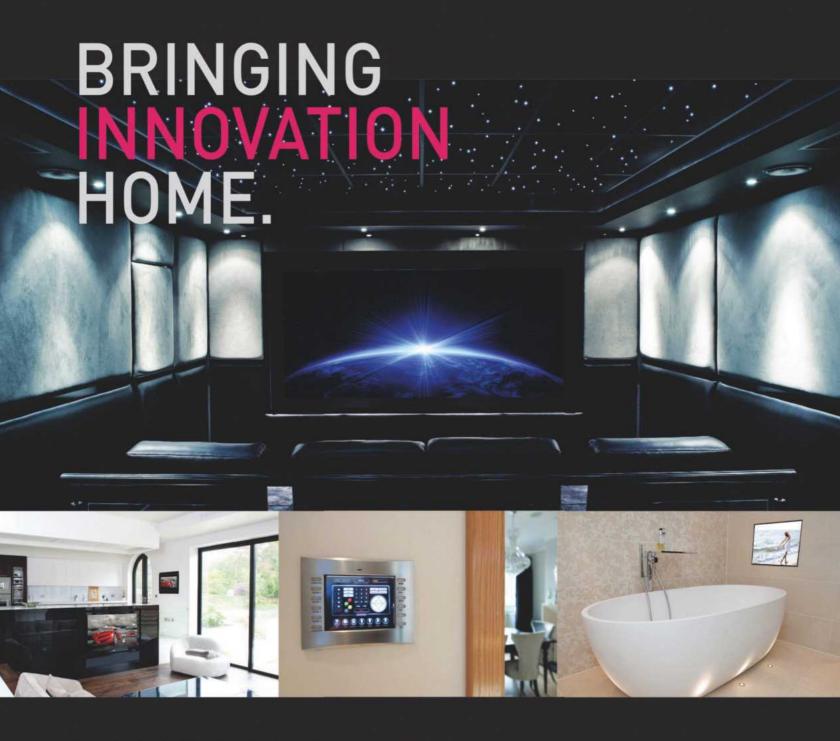
more responsive than that experienced on earlier screens which generally involved a lot of furious hand-waving for no good purpose. So does anyone actually use gesture control in real life? Hard to tell — I've found that the novelty wears off pretty quickly.

Catch-up TV is well supported. Samsung was the first set manufacturer to offer all the major broadcast catch-up channels (BBC iPlayer, ITV Player, Demand 5 and 4OD) and complements this with a huge range of other services, including Spotify, The Weather Channel, Rightmove, YouTube, Facebook and Twitter. In total the brand claims to offer around 650 downloadable apps from its Smart Portal. However, if you buy a new-range screen early in its cycle, it's not unusual to find some services initially missing, only to be added during a firmware upgrade.

Overall, a dizzying experience, but some rivals have a sleeker approach \blacksquare

SPECIFICATIONS

CATCH UP TV SERVICES: BBC iPlayer, ITV
Player, Demand 5, 40D, YouTube
MOVIE STREAMING SERVICES: Netflix,
Amazon Prime Instant Video, KnowHow Movies
VOICE CONTROL: Yes
MOTION CONTROL: Yes
MEDIA PLAYBACK (USB/DLNA): MKV, MOV,
MP4, AVI, WMV, MP3, FLAC, WMA, WAV
ADDITIONAL FEATURES: Skype, Twitter
client, Miracast screen mirroring, smartphone/
tablet app control; S Recommendation system;
Smart Touch Control



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On a voyage of Discovery

Sony's service is still lacking VOD, but the revamped search functionality is a neat idea



SONY HAS MADE some major changes to its Smart TV portal this year. Now embracing a traditional silo format, apps and functions are held away from linear content in a green-tinged *parc fermé*, and offer 'One Flick' entertainment (on its W7, W8, W85, W95 and X9 models).

Here, favoured apps can be kettled into a My Apps area, be they catch-up services BBC IPlayer or Demand 5, subscription VOD like Amazon Prime Instant Video, Netflix, Mubi or Sony's own power trio: Music unlimited, PlayMemories photo sharing and Movies Unlimited. The latter, despite being a proprietary service, offers a good range of up-to-date film releases.

Unfortunately, Sony's content smorgasbord still doesn't offer ITV Player or 4OD, so you'll need to access those from another device. You can, however, bolster your app armoury by raiding Sony's main app repository, the majority of which is largely bonkers junk.

The dedicated apps launch page also transpires to be a handy place to access Sony's General Settings menus, which are relegated to titchy icons in the top right of the screen. They flank shortcuts to TV, movies, images and music.

One definite highlight of the 2014 Sony user interface is the One Flick Discovery bar, used to search and filter content from broadcast TV, YouTube and video-on-demand services. The bar is parked at the bottom of the screen and generally recommends things of interest to watch. By way of fine-tuning, it also supports

keyword search, which makes it quite a powerful content-curation tool if you want to watch programmes about, say, hamsters or quantum physics. Or both.

The Discovery bar also works well with the touchpad Bluetooth remote supplied with high-end sets.

There's a predictably big nod to social media here, in the form of Social View. This mode can be accessed direct from the remote and combines live broadcasts with a tweet stream that can be overlaid upon the image or positioned beneath a minimised picture. Tweets can relate to the TV show being broadcast or specific search terms which you can enter. It's a cute solution for Twitter obsessives, but will almost certainly prove distracting for fellow viewers not too interested in such off-the-cuff flotsam.

Also with social very much in mind is a Picture-outside-Picture Skype mode, which ostensibly allows disparate viewers to join together while watching the same show or sports coverage. Currently only one screen in the Sony line-up has an integrated camera (the 4K KD-X9005B) — all the rest have a clumsy-looking USB camera perched precariously on the bezel.

Less smart is the fact that the TV guide lacks even a basic live TV POP window.

Sony Smart screens offer a solid range of multimedia playback support over both network and from USB. Popular codecs and containers, including MKV, MOV, MP3 and WAV, are all playable. Those with sizeable

media collections are unlikely to be disappointed. However, while DLNA compliant, the TV's media player does seem a tad sensitive to server implementations. One of my long-standing NAS devices, which continues to work well with other brands, caused the Sony to crash every time I asked the set to connect to it. Still, my test TV worked well enough with other NAS storage options.

Ultimately Sony's 2014 Smart platform is a mix of the inspired and the perfunctory. The lack of a full complement of catch-up TV continues to be an Achilles' heel, and there's no indication that the brand feels compelled to address the issue (someone somewhere is clearly playing hardball). It can seem ponderously slow at times, too, proffering a plaintive 'Please Wait' instruction on occasion. However, the Discovery bar is a welcome innovation

SPECIFICATIONS

CATCH UP TV SERVICES: BBC iPlayer, Demand 5, You Tube, BBC News, BBC Sport, Sky News MOVIE STREAMING SERVICES: Netflix, Amazon Prime Instant Video, Mubi, Sony Entertainment Television, Manga, Movies Unlimited, Blinkbox VOICE CONTROL: No MOTION CONTROL: No MOTION CONTROL: NO MEDIA PLAYBACK (USB/ DLNA): MKV, MOV, MP4, AVI, WMV, MP3, AAC, M4A, WMA, WAV ADDITIONAL FEATURES: Skype, Miracast screen mirroring, Photo Share, Twitter Social View, smartphone/tablet app control

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The less is more approach

Toshiba bounces back with some innovative ideas and a neat and tidy interface



IT'S PROBABLY FAIR to say that Toshiba hasn't exactly led the field when it comes to Smart TV functionality. Some basic IPTV connectability on its entry-level tellies and a largely disastrous attempt to up the ante with Toshiba Places, a cross platform mash-up offering dedicated areas for social content and video streaming (but with curiously unintegrated YouTube and BBC iPlayer), are best forgotten.

But finally we have something of genuine interest in Toshiba's Smart TV Cloud service, available on its L6, L7 and L9 models. The new Home page mixes a live TV feed with content tabs (Kids, Movie, Sport, Entertainment and Personal) with a Twitter window that pulls feeds from a trio of broadcasting shows. This tweetable trio are actually dictated by the set's MediaGuide EPG, which supports deep search through metadata links. Select the home page Twitter module and you're whisked to a larger broadcast window with fullscreen scrolling Twitter interface. Toshiba is one of many TV manufacturers who seem to believe that habitual second-screening viewers will be content to relinquish their smartphones if the experience is good enough on the larger screen.

Here a navigation bar highlights trending shows and hashtags. You can, of course, enter your own; the set then offers up similar or related suggestions. This all works rather well, although it could prove a massive TV spoiler trap for the unwary.

MediaGuide has other tricks up its sleeve. Hook up a hard drive to a USB slot and you can not only timeshift tuner recordings in the usual way, but also take advantage of a feature called MediaGuide Replay (available on Toshiba's L6 and L7 screens). This is essentially a Series Link function that enables you to use your TV more like a regular PVR, single-tuner restrictions permitting. The MediaGuide can automatically make recordings based on your viewing history and preferences; shades of VirginMedia's TiVo Suggestions auto record feature. Toshiba sells a 1TB drive, the tidy Stor.E ALU TV, for the purpose.

By way of onscreen customisation you can choose from a selection of 11 largely anonymous wallpapers. That's about as visually fancy as things get.

Connected services include Netflix, BBC Sport and News, YouTube, Vimeo, Innovation TV, BBC iPlayer, Blinkbox, Viewster, Knowhow movies and Dailymotion. Toshiba is actually part of the Smart TV Alliance that includes TP Vision (aka Philips TVs), Panasonic and Vestel, which should ensure a high level of ongoing app developer support.

Toshiba's Smart TV Cloud models support Miracast-driven screen mirroring with compatible smartphones, and offer Intel WiDi for duplicating the display of an enabled laptop PC. The platform also offers a selection of casual games.

Overall usability and navigation is good. I auditioned the Smart TV Cloud service on the brand's 47L7453, and was impressed by the speed of the set's Quad Core processor.

SPECIFICATIONS

CATCH UP TV SERVICES: BBC iPlayer, YouTube
MOVIE STREAMING SERVICES: Netflix,
Vimeo, Viewster, Blinkbox, Dailymotion
VOICE CONTROL: No
MOTION CONTROL: No
MEDIA PLAYBACK (USB/DLNA): MKV, MOV,
MP4, MP3, M4a, WAV and WMA
ADDITIONAL FEATURES: Intel WiDi, Skype,
Miracast screen mirroring, smartphone/tablet
app control; Twitter integration, MediaGuide
Replay USB PVR functionality with automated
recording based on preferences

Toshiba's Smart TV Cloud range starts at its L6 models. Meander lower in the lineup and you'll get a somewhat stripped-down Smart experience built primarily around the most ubiquitous streaming services: Netflix, BBC iPlayer, YouTube and BBC News.

Multimedia support is usable but not comprehensive. I played MKV, MP4 and MOV video files across the network, but the set drew the line at AVI and WMVs. Audio support is limited to MP3, M4A, WAV and WMA. Control is via a vanilla-flavoured IR remote.

While Toshiba's Smart TV Cloud has fewer interactive bells and whistles than its rivals, there's no doubt that the platform is eminently usable and refreshingly straightforward. For viewers looking for a good spread of subscription and free content, it delivers. The integration of Twitter is also particularly slick, although I remain unconvinced that social media really belongs on a big screen

Final standings

connected screens are hubs of perpetual entertainment, and improvements in encoding and broadband speeds mean you needn't be concerned about the quality of IPTV, as long as you live in a well-served broadband area. Yet VOD isn't everything when it comes to Smart TV — other factors come into play...

In truth, all of our featured Smart platforms deliver an entertaining connected experience. Toshiba offers a slick UX built around the sophisticated MediaGuide EPG, and can also boast the best TV Twitter application. Ultimately, though, its lack of scope relegates it to joint fourth position here.

When it comes to AV performance and design, Sony is riding high, however its Smart proposition is mid-ranking, hampered by limited catch-up. The standout feature is the One-Flick Discovery bar, a powerful recommendation tool.

Samsung has long dominated the connected TV arena. Its Smart Hub is a satisfying mix of usability and content. There's nothing missing, and it comes recommended. That it only ranks third shows just how much the competition has improved.

If catch-up TV is your passion, then Panasonic is the go-to brand. Its Freetime roll-back EPG massively simplifies missed programme browsing, and it also offers the uniquely powerful and customisable My Home Screen.

However, edging ahead of all rivals is LG's WebOS. Other brands may boast more features, but none have such beguiling simplicity or sophistication. The WebOS launcher effortlessly mixes linear content with IPTV and allows switching between streaming services as though they were conventional channels. From a user point of view, this is a revolution in usability

HCC VERDICT



LG Smart+ TV with WebOS → www.lg.co.uk → Tel: 0844 847 5454 HIGHS: Fully integrated user experience; seamless input switching; excellent Magic Remote controller; extremely intuitive; Now TV LOWS: Works best with fewer apps;

Content
Design ****
Features ***

Overall ***

HCC VERDICT



Panasonic Freetime & My Stream

→ www.panasonic.co.uk → Tel: 0844 844 3899 HIGHS: Freetime roll-back EPG; customisable my Home Screen page; curated content My Stream LOWS: Challenging Touch Pad controller; Info Bar needs more info

HCC VERDICT

limited audio file support



Samsung Smart Hub → www.samsung.co.uk

→ Tel: 0330 726 7864

HIGHS: Full suite of catch-up TV;
wide range of streaming services; fast
and responsive UI

LOWS: Games content a bit dull; gesture control still unconvincing

Content ****

Design ***

Features **

Overall **

HCC Verdict



Sony Entertainment Network

→ www.sony.co.uk → Tel: 0844 736 0595 HIGHS: One Flick Discovery bar; solid selection of movie services LOWS: Limited mainstream catch-up TV services; Social View intrusive; generally sluggish

Content ★★★

Design ★★★

Features ★★★

Overall ★★★

HCC VERDICT



Toshiba Smart TV Cloud → www.toshiba.co.uk

→ Tel: 0333 222 7444 **HIGHS:** Ease of use; MediaGuide Replay feature; accomplished Twitter integration

LOWS: Limited catch-up TV services; bog-standard IR controller







Celebrating pure audio

Primare's lush-looking SPA23 is an unapologetically stripped-down home cinema amplifier. **Steve May** appreciates its highly-priced economy

AV Info

PRODUCT: Premium 5.1channel home cinema amplifier

POSITION: Currently top of the

Primare AV range

Arcam FMJ AVR750. Anthem MRX-710; Denon AVR-4520

As well as this full-size remote, the SPA23 comes with a palm-sized zapper

PRIMARE, PURVEYOR OF high-end AV and hi-fi, isn't a noted follower of fashion. Its stock in trade is immaculately built and designed components for the connoisseur. While this philosophy has a natural affinity with two-channel hi-fi, it's a less easy fit with AV, where features and functions are typically stacked higher than Godzilla's galoshes.

The SPA23 home cinema amp wears its attributes on its sleeve. This is a beautifullooking amplifier: the distinctive Primare bullet knobs bookend the unit's display, which itself is refreshingly large and legible. A quartet of buttons offer a modicum of on-body control.

On the back panel, Primare has swept away the forest of legacy inputs which routinely blight AV receivers. This amplifier offers five HDMI inputs and two outputs. All are vanilla-flavoured v1.4 offerings, so no talk of 4K passthrough or ARC here. There's no HDMI standby passthrough either. They will, however, tolerate 3D signals, which is some

concession to modernity. The two HDMI outputs, it should be noted, cannot be used simultaneously; you need to specify an output for any given source in the setup menu. In addition to four stereo phono inputs, there's a set of 7.1 inputs for use with Super Audio CD and DVD-Audio players, plus a second audio zone feed and full set of pre-outs.

Additional connectivity comprises six digital audio inputs (three coaxial, three optical), plus digital outs for both. System control options cover IR, RS232 and a trio of 12V triggers. Speaker binding posts are reassuringly meaningful. Like Anthem's new MRX models, there's no network functionality at all, not even a USB input. If you want file playback, you'll need a separate network source.

The SPA23 is a standard 5.1 design, with each channel rated at 120W into 8 ohms. This isn't a fantasy figure. The SPA23 can make grown-up speakers bleed, as I found out when I selected Linkin Park Live in Texas with the



volume unwittingly ramped up. The blast was loud enough to stampede cattle.

Performance is outstanding. Using an Oppo BD player routed into a Musical Fidelity V90 DAC, the SPA23 effortlessly paints a wide, dynamic soundstage. *P5HNG ME A*WY*, from the band's CD/DVD pack, has a driving urgency that demonstrates the SPA23's ability to ringfence vocal clarity regardless how forceful the metal wrapper. The same track from the accompanying live DVD, in DD 5.1, offers even greater delineation. Similarly, *Numb* drops fast, deep and tight, with the ambiance of the stadium venue subtle but entirely convincing.

'Primare's UFPD amps sound lithe and entertaining. Multichannel mixes are seamlessly muscular'

Beneath the hood, the SPA23 employs 24-bit/192kps Wolfson DACs, used in conjunction with Burr Brown and Texas Instruments op-amps. The Bypass mode, which sidesteps all DSP, offers a tad more transparency than the main stereo mode, but there's not much to choose between the two.

Digital diva

The SPA23 is one of a new breed of Class D amps from Primare designated as UFPD (Ultra Fast Power Device). The combination of digital amplification and switch-mode power supply might once have raised eyebrows at high-end hi-fi soirees, but in truth, premium digital amplification can sound extremely exciting (a prime example being Bang & Olufsen's ICE Power) and the tech offers practical benefits in terms of efficiency and heat management. Of course, poorly implemented digital amps can also sound metallic and glassy. Here, UFPD keeps distortion uniformly low (particularly around 7kHz) irrespective of load, evidently helping vocal performance. The

Back-panel connectivity is neatly arranged

SPA23 also employs isolating Power Factor Control technology which regulates the current from the mains voltage, massaging the supply.

The good news is that UFPD sounds lithe and entertaining. During the opening sequence for *Star Trek: Into Darkness*, Kirk and Bones flee from an unruly tribe intent on skewering them; spears whistle cleanly from front to rear. As the VFX grow in scale, so does the audio. When the erupting volcano roils around Spock, the shuttle craft spins around the soundfield, its engines evidently doing some heavy lifting from LCR to right rear, all seamlessly muscular via the Primare. This amp does spectacle well!

The SPA23 predictably snubs the trend of ubiquitous auto calibration. It takes a more frugal approach to setup, but it's not all sackcloth and ashes. The menu is a clean textual affair, covering all the required input, audio, video and speaker settings, plus control/zone 2 configuration. The video input allows you to not only assign and rename sources, but set equipment triggers, AV delay (in ms) and default audio processing, be it stereo, all-channel party mode, Pro-Logic IIx or Neo: 6.

Similarly, individual level and distance for speakers can be managed. You can alter the size and crossover for left, right and sub, plus centre and surrounds, in 10Hz increments from 40Hz to 200Hz, along with levels and distance. There's also a menu option, called Double Bass, to engage the subwoofer for stereophonic material (not so nice).

As you might have gathered, this Primare has zero interest in extra height or width processing. DTS-HD Master Audio and Dolby TrueHD are decoded using a Sharc DSP from Analog Devices; the amp naturally copes with sibling codecs such as DTS Neo:6, DTS 96/24 and Dolby Digital EX.

Class-leading clarity

The Primare SPA23 is an unashamedly uncomplicated home cinema receiver, enlivened by gorgeous design and ingenious amplification technology. While it's unlikely to be shortlisted by studious badge-hunters, it should definitely appeal to those after a premium multichannel experience. It's fit, fast and capable of class-leading clarity

On the menu



→ Primare's menu system is as unfussy as its hardware design. Resolutely text-based, it's nevertheless easy to navigate and quick to use

SPECIFICATIONS

DOLBY TRUEHD: Yes. Plus Pro-Logic IIx DTS-HD MASTER AUDIO: Yes. Plus Neo:6 THX: No MULTICHANNEL INPUT: Yes. 7.1 analogue

MULTICHANNEL OUTPUT (CLAIMED): 5 x 120W (into 8 ohms) MULTIROOM: Yes. Second audio zone

AV INPUTS: 4 x stereo phono; 6 x digital audio (3 x optical and 3 x coaxial) HDMI: Yes. 5 x inputs; 2 x outputs (v1.4)

VIDEO UPSCALING: Yes. To 1080p COMPONENT VIDEO: No DIMENSIONS: 430(w) x 385(d) x 180(h) mm

ALSO FEATURING: 3 x 12V triggers, RS232 and IR control; UFPD amplifier technology; Bypass mode; Power Factor Control technology; source -assignable inputs

HCC Verdict



Primare SPA23

no 4K compatibility

→£3,500 Approx → www.karma-av.co.uk → Tel: 01423 358846 HIGHS: Dynamic, articulate presentation with acres of headroom; beautiful build quality and design; a doddle to use LOWS: Limited specification – no network functionality, no HDMI standby passthrough and







Pushing Blu-ray to its Full HD limits

Although many of its video processing features will cause head-scratching, the DMP-BDT700 offers plenty of other high-performance tricks that gain Mark Craven's seal of approval

AV Info

PRODUCT Premium THXcertified 4K upscaling BD deck

POSITION: Panasonic's flagship disc spinner

Oppo BDP-103D; Sony BDP-S7200; Marantz UD7007

PANASONIC RETURNS TO the upper tiers of Blu-ray hardware with its DMP-BDT700, chucking nearly everything at a new rangetopper that could well be its last high-end Full HD outing before 4K discs become a reality. With its £500 ticket, it competes against rival machines from the likes of Oppo and Marantz, but very much goes off in its own direction.

The feature set here is both overwhelming and a little disappointing. The latter because Panasonic has left Super Audio CD and DVD-Audio support off the spec sheet. This isn't much of a surprise considering the brand's history, but even in 2014, for a small army of audiophiles this will scratch the DMP-BDT700 from their wishlist. This would be a shame as it has other audio talents up its sleeve - including a full 7.1-channel suite of analogue outputs, a bevy of 192kHz/32-bit DACs, hi-res FLAC and WAV playback (the former including multichannel) and some intriguing postprocessing modes to make the most of music sources. Panasonic sees it very much as an audio player as well as a movie machine.

On the video side, the DMP-BDT700 claims two unique features: THX-certified 4K upscaling (and 50/60p 4:4:4 support) and 4K JPEG playback. The latter lets the player act as a conduit for home-brewed hi-res photos (there's an SD card slot hidden beneath the deck's front flap, as well as a USB input). However, it wouldn't play 4K MP4 footage culled from the brand's own DMC-GH4 camera.

As well as this, there's a dizzying range of onboard picture tweaks available, including sharpness, noise reduction, luminance, gamma and saturation tools. I find these a curious addition - many will bypass them entirely, scared off by the very words 'Vertical Chroma Bandwidth', and those with an interest in massaging an image are far more likely to do it at the display end.

Full-width design

Some thought has gone into the DMP-BDT700's styling. Many modern Blu-ray decks are as exciting to look at as a biscuit tin, but

The remote is a pleasure to use, with firm keys and a sensible layout





this combines a glossy top panel and brushed fascia with chunky silver feet. It looks quite lush. Construction seems solid, too — with the disc tray less wobbly than most.

The user interface has also been given a premium spit and polish compared to the brand's other 2014 players, with a sharply rendered in-depth menu system that makes the setup process fairly slick. You can even add your own wallpaper to the home screen, which offers icons for Video, Music, Photo plus network options. A shame you can't re-decorate the Viera Connect hub interface, which remains a bit slow to use and in-yerface. Netflix is, of course, an option here (and it gets its own button on the nicely-hewn premium-feel handset), but with no HEVC decoder onboard it won't serve up Ultra HD streams of House of Cards, Breaking Bad or anything else. 4K JPEGs, on the other hand, arrived with all their intricate details and mesmerising sense of depth in tact. UHD still images are a thing of beauty.

As well as those 7.1 phonos, there are two HDMI outputs around the back, allowing the player to split its AV output for optimum performance (Panasonic calls this mode High Clarity Sound). As we've seen recently in our letters pages, splitting a signal can cause HDMI syncing problems with some kit configurations. With the audio output running to a Pioneer VSX-924 receiver and video sent directly to a Sony KD-65X9005B screen, and later a Panasonic Full HD model, I had no problems.

So is the DMP-BDT700's own upscaling an improvement on that of a 4K display? This will depend on the display obviously. With my reference 65in Sony, switching the player's output between Full HD and UHD and viewing from a sensible distance, there's no obvious difference to report. Pressing my peepers against the glass proves equally inconclusive, with the exception of some infrequent white

'sparklies' that were visible on one occasion (during a BD's language selection menu) but couldn't be replicated the next day.

There's an argument that Panasonic's latest UniPhier chipset may be of more use with the swathe of cheaper 4K panels on the horizon – armed with less potent silicon – than Sony's flagship. That said, I was happy to leave the Panasonic in 4K output mode (and ready for my 4K still images) for simplicity's sake.

With *Django Unchained* on Blu-ray uprezzed to 4K, the deck's visuals are immaculate. It's an assured, devastatingly detailed performance. Without busying myself with any of the onboard tweaks, I was impressed by its natural image, which combines high contrast with smooth motion and a sensibly neutral palette, whereas some BD decks can ramp up colour saturation. Hooked up to a Full HD display and the player still enthrals, and 3D fans may appreciate the rather potent depth adjustment engine and 2D-3D mode.

The DMP-BDT700 certainly moonlights as a solid audio player. SACD/DVD-A may be off-limits, but its two-channel CD presentation (via analogue output) is full of body. Johnny Cash's I Hung My Head moseys out of my front

'Panasonic has aimed upmarket and crafted a deck with quality construction and faultless performance'

speakers with Old West charm, with the Man in Black's mournful vocals picked sweetly out from the piano and acoustic guitar. Bruce Springsteen's *Downbound Train* is similarly emotional. To cheer myself up a bit, I turned to The Monkees, and found the player's range of Sound Effect modes worthy of investigation, particularly the six vacuum-tube imitating Digital Tube Sound options, which usher in more bass weight and, yes, warmth to the jangly '60s pop. The same tools can be used with hi-res digital audio files — the Panasonic performed as advertised, handling 24-bit FLAC and WAV but drawing a blank with DSDs.

Easy to recommend

Overall, this is an accomplished love-letter to Blu-ray from Panasonic. Its engineers have aimed upmarket and delivered a player with quality construction and copious connectivity, plus some welcome features — highlights are the extremely useful 4K JPEG support, hi-res audio knowhow and sonic post-processing. AV quality is impossible to fault. The lack of true 'universal' status is unfortunate considering the price point — and those bafflingly in-depth picture calibration tools are unnecessary — but it's easy to recommend ■

On the menu



→ Zing! The DMP-BDT700 boasts an overhauled menu design that continues the high-end feel. It's understated, but very well-designed and easily navigated by the supplied handset

SPECIFICATIONS

3D: Yes
UPSCALING: Yes. To 4K via 4K Direct
Chroma Upscaling
MULTIREGION: No. Region B BD/R2 DVD
HDMI: Yes. 2 x outputs
COMPONENT: No
MULTICHANNEL ANALOGUE: Yes. 7.1 and
stereo phono

DIGITAL AUDIO: Yes. Coaxial and optical outputs
ETHERNET: Yes
BUILT IN WI-FI: Yes

SACD /DVD-A: No/No DOLBY TRUEHD/DTS-HD DECODING: Yes DOLBY TRUEHD/DTS-HD BITSTREAM: Yes DIMENSIONS: 446(w) x 68(h) x 246(d) 70h

FEATURES: 2D-3D conversion; 4K JPEĞ playback; 4K 50p/60p 4:4:4 output; USB; SD card slot; DLNA media playback (renderer and player); hi-res FLAC and WAV playback; Miracast screen mirroring; Wi-Fi Direct; picture adjustments including sharpness, noise, colour, gamma, contrast, brightness, saturation and hue; Sound Effect modes (Remaster and Digital Tube Sound with 192kHz/32-bit upsampling); High Clarity Sound; Viera Connect Smart hub

HCC VERDICT



Panasonic DMP-BDT700

→ £500 Approx → www.panasonic.co.uk → Tel: 0844 844 3899 HIGHS: Audio processing features; pristine image quality; neat design and solid build; Smart features; 4K JPEG playback LOWS: Intimidating barrage of video tweaks; not a universal player; Panasonic's Smart hub is still a weak link





At your convenience

Mark Craven auditions a well-connected 2.1 system with a special trick – truly wireless surround speakers that turn it into a 4.1 setup. But can it impress with its audio performance?

AV Info

PRODUCT:2.1 all-in-one package with surround option

POSITION: One of five Philips 2.1 solutions

PEERS: Philips Fidelio HTL9100; Panasonic SC-BTT230 PHILIPS HAS ALWAYS been a company known for its innovative ethos. And that still remains, despite the CE aspects of the brand now being split between two separate entities (TP Vision for TVs, Woox Innovations for audio, recently acquired by Gibson). The former still advocates Ambilight technologies and potent processing, while the latter has been attacking the domestic audio market with some neat ideas, under the Fidelio umbrella.

Last year we tested its highly-impressive X1 open-backed headphones and its shape-shifting HTL9100 soundbar. The E5 system reviewed here is similar to that 'bar, in that it provides wireless surround audio from a flexible design.

The E5 is described as a 2.1 package, but it is more than just a bunch of speakers. Onboard amplification, to the tune of 210W, is joined by 2-in, 1-out HDMI connectivity and aptX Bluetooth provision, making it a versatile proposition in terms of external sources.

Build quality and design generally impress, although with a £600 asking price I expect them to. The two stereo speakers are clad in a cloth wrap, adorned with the Fidelio logo, and stand 400mm tall. This is probably larger than you might imagine — way chunkier than most 'satellite' speakers and more suited, aesthetically, to TV screens around the 50in mark than a 32in/37in. The edges of the cabinets are gently curved and each seems a little lightweight (4kg) considering their dimensions. Still, in comparison to a speaker from a typical mass market all-in-one array, they look and feel suitably premium.

The stereo speakers are actually made of two separate units — and this is where the E5's flexibility comes into play. The upper section, with its real-wood top-plate and carry handle, can be disconnected from the bottom part (simply by lifting it off) and placed anywhere in your room while still disgorging audio. No cables are required — it packs an onboard



battery that charges when connected to the main speaker. The result is a 4.1 package, providing you can find somewhere to house the surround modules (Philips' marketing imagery (left) suggests sticking them on the back of the sofa...) and remember to replenish their batteries when not in use.

Easy installation

Installation is a matter of plugging in the right speaker, connecting this to the left speaker via the supplied cable (which is a decent length, enabling a wide stereo image) and hitting the 'on' button on the remote. The subwoofer connects wirelessly (a magic trick I never tire of) and you're ready to rock.

Well, almost. Philips has adopted a colour LED status system, and the LEDs are tiny, peeking out from behind the grilles of the right speaker and subwoofer, and you'll have to resort to the manual (which isn't great) to learn the differences between a blinking blue and a steady orange.

Initially, I paired the E5s via Bluetooth to my Mac, listening to a swathe of M4A files in straight 2.1 configuration. Manual adjustment extends to just treble and bass controls, and I had to resort to the latter, as with Robert Palmer's Sneakin' Sally Through The Alley, the subwoofer seemed to be barely making an impact. With that resolved, the E5s showed an appealing performance. The rear-ported sub (which uses a 6.5in driver) seemed happy placed in my room's corner, a little way out from the wall, and integrated nicely with the left/right pairing. Bass is neither overblown nor left wanting, with a warm, fulsome tone that gripped tightly onto the track's oh-so-funky basslines. On top of this, the mid-range proved equally syrupy, with Palmer's vocals given impressive body. Treble details, such as hi-hats, aren't ignored

either, sounding only a touch splashy and indistinct compared to the tightness evidenced across the rest of the frequency range.

On to movies, and switching to multichannel mode with the Denzel Washington drama *Flight*, fed directly via HDMI as multichannel PCM from Panasonic's DMP-BDT700. Here, during the pivotal airplane sequence, the E5's subwoofer again proves its chops, tracking the throbbing jet engines with depth and control. In fact, any worries that the woofer would work best with music material are quickly assuaged – with the

'The subwoofer connects wirelessly – a magic trick I never tire of – and offers real low-end presence'

volume cranked up (and the Philips goes loud by the way), the sub offers real presence, with bass effects you can feel.

The surround speakers do their job well. As with the HTL9100, an obvious criticism is that the single 2.5in full-range driver lacks heft, but they still output atmospheric effects with urgency and provide useful backup to the front soundstage when Alan Silvestri's orchestral score comes into play.

Yet perhaps a soundbar's most important aspect is its dialogue clarity – after all, this 2.1 package will be expected to cater for soap operas as well as action adventures. And the E5 nails it, with a distinct 'centre channel' hanging between the two stereo speakers that lifts voices to the fore.

With its flexible setup, crowd-pleasing sonics and living-room looks, I can't imagine any buyer of the Fidelio E5 being disappointed. Control/operation could be sleeker, but everything else here is hunky-dory

SPECIFICATIONS

DRIVE UNITS: 2 x 2.5in full-range drivers (surround speakers); 2 x 1in soft dome tweeters and 2 x 3in full-range drivers (satellite speakers)

AMPLIFICATION: 210W (120W + 90W)

CONNECTIONS: 2 x HDMI inputs; 1 x HDMI output (ARC); coaxial digital audio input; 3.5mm audio input digital audio input; 3.5mm audio input DOLBY TRUEHD/DTS-HD MA: No/No. Dolby Digital, DTS Digital Surround SEPARATE SUB: Yes. With 6.5in driver,

rear-ported

REMOTE CONTROL: Yes

DIMENSIONS (SPEAKER, INC DETACHABLE

DIMENSIONS (SUBWOOFER): 220(w) X 440(h) x 220(d)mm WEIGHT: 5.4kg

SURROUND): 160(w) x 400(h) x 160(d)mm

FEATURES: aptX Bluetooth; treble and bass adjustment; surround mode; surround speakers recharge when docked; HDMI CEC

HCC Verdict



Philips Fidelio E5

→£600 Approx → www.philips.co.uk → Tel: 0800 331 6016 **HIGHS:** Flexible functionality; impressively punchy audio performance; simple installation; neat styling

LOWS: Operation can be a bit tricksy; speakers are quite large; surround channels lack body



Single-minded soundbar

No Wi-Fi, HDMI or separate subwoofer – Canton's DM9 is as straightforward as soundbars come. Luckily, as **John Archer** discovers, its audio performance is far from ordinary



about. Its audio products are never ugly, but aesthetic concerns aren't allowed to take precedence over performance. Nor does the German brand get hung up on fleeting trends. You just get the stuff that matters. Its new DM9 soundbar is a perfect example of this ethos.

Design-wise it's essentially just a chunky jet-black elongated rectangle, roughly the width of a 42in TV with around two inches of depth for its sextet of drivers to work in. The only thing alleviating the blackness is a central power light alongside a basic LED display. The unit is beautifully built, though.

The design supports wall-mounting. Simple hanging holes are found at each end, with the screws and mounting template included. An EQ1 audio preset is configured to give the best sound for a wall-hung situation; EQ2 is meant for when the DM9 is positioned in front of a TV; EQ3 suits shelf-/rack-mounting.

Connections comprise optical and coaxial digital audio inputs, a stereo audio input and an output for adding an external active subwoofer. There's aptX Bluetooth support for music streaming, but no HDMI.

AV Info

PRODUCT:Mid-range
Bluetooth soundbar

POSITION:Part of the brand's Digital Movie series

PEERS: Bose Cinemate 1SR; Sonos PlayBar; Pioneer SBX-N700 You can switch between stereo and surround audio settings, adjust the audio delay to fix lip-sync issues, and tweak the treble and bass.

Stonker!

In action the DM9 sounds stonking.
As with Canton's

soundbase, the DM9's movie performance is characterised by impressive levels of volume, dynamic range and detail. During the Kaiju/

dynamic range and detail. During the Kaiju/ Jaeger battles in *Pacific Rim*, low-frequency impacts hit hard, going deep enough to match the scale of a Kaiju footfall without overwhelming the rest of the soundstage. There's no hint of distortion either, and bass timing is immaculate.

This startling bass performance is joined by strong, harshness-free treble and a mid-range wide and clean enough to smoothly bridge the gap between the frequency extremes.

The whole shebang is very well-balanced and cohesive.

No integrated TV sound system – not even that of Sony's class-leading X9005B 4K TVs – can rival what Canton gets from the DM9's remarkably small frame. And, perhaps more importantly, precious few remotely affordable soundbars can outgun the DM9 either.

In fact, my only complaint about its performance is that dialogue can get lost during loud action scenes when using the Surround audio setting, which you may turn to in search of a more wraparound sound. My advice is to stick to the standard stereo mode, as here the DM9 is still able to thrust a soundmix out into your viewing room.

I guess you could argue the DM9 is expensive by soundbar standards. Other brands certainly pack more features in at this price point. However, the sound quality the Canton delivers is only possible via the sort of engineering and component excellence that never comes cheap

SPECIFICATIONS

DRIVE UNITS: 4 x 4in woofers; 2 x 2in mid-range drivers; 2 x 1in tweeters AMPLIFICATION: 200W CONNECTIONS: Coaxial digital audio input; optical digital audio input; stereo audio input; service port; subwoofer output DOLBY TRUEHD/DTS-HD MA: No/No. Dolby Digital, DTS TruSurround SEPARATE SUB: No (but there is connection for optional active sub) REMOTE CONTROL: Yes DIMENSIONS: 890(w) x 120(h) x 70(d)mm WEIGHT: 4.8kg FEATURES: aptX Bluetooth; three EQ settings

FEATURES: aptX Bluetooth; three EQ settings to suit different positions; wall-hangable design and fittings, lip-sync adjust, stereo and surround settings; treble and bass adjustments

HCC VERDICT

Canton DM9

→£480 approx → www.unlimited.com/canton
HIGHS: Excellent, powerful performance; superb
build quality; easy to set up and use
LOWS: Dialogue can go AWOL in Surround
mode; no HDMI hookup; it's not cheap; design is
a bit functional, perhaps







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Waiting for 4K content? Make some!

Panasonic's DMC-GH4 system camera shoots 2160p. Steve May is thrilled by the results

WITH COMMERCIAL 4K content still conspicuous by its absence, a solution for UHD TV owners is to make their own. Photographers have long been capturing images in excess of eight megapixels, but the Panasonic GH4 is the first Micro Four Thirds system camera to offer 4K shooting modes.

Even without 2160p compatibility, this is a remarkable imaging tool. A 16.05-megapixel Live MOS sensor captures images of remarkable clarity, there are copious creative modes to explore, and the 3in OLED screen is a delight. However, it's 4K that really sets it apart.

The GH4 encodes UHD in H.264 MPEG-4. Frame rates are capped at 30Hz/fps, so no *Hobbit*-style options are available. The maximum continuous recording time in 4K is a second shy of thirty minutes, with the recording split into multiple files. Unfortunately, because the GH4 doesn't use efficient HEVC encoding, file sizes are extremely large, taking only minutes to consume GBs of space. You'll



need at least

a 32GB Class 3 SD card. While $3,840 \times 2,160$ is the standard resolution, you can also record pro-grade $4,096 \times 2,160$.

Playback options include direct connection via HDMI, SD card (Panasonic's new AX802 TVs have a 4K-compatible slot) or

The DMC-GH4 shoots at 3,840 x 2,160

from a NAS or USB (depending on your media player).

Image quality is sensational. Until we start to see 4K from broadcast or packaged media sources you'll struggle to push a panel to this kind of level. Skin textures, brickwork, fabrics... all exhibit preternatural detail. Sequences lensed around London's Chinatown transpire to be outstanding UHD demo footage. Easy to see why Panasonic believes DIY UHD could be a killer app



ACER 6510BD→Approx£500

Home cinema for just a monkey

£500 gets you Acer's Full HD DLP projector. John Archer wonders why anyone buys a 32in TV

DESPITE COSTING JUST £500, Acer's H6510BD is surprisingly pretty with its angular, minimalist lines and gloss-white finish. Its connections match those of many more expensive PJs too, with HDMI, D-Sub PC, VGA and USB offered. Setup is a mixed bag. On the downside there's no optical vertical image

shift, meaning many people will need to use keystone correction to straighten the edges of their pictures. Optical zoom is limited, too. There's an expansive bag of picture calibration tools, though, including gamma adjustment and fulsome colour management.

A spin through of the dull-but-pretty Oz The

Great and Powerful uncovers some unexpected brightness and colour richness from the H6510BD. The moment where the film switches from black-and-white to intensely saturated colour looks genuinely spectacular. The colour dynamism

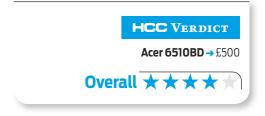
The 6510BD even includes gamma and colour management

doesn't stop tones looking natural, either; the Acer has a neat sideline in subtlety.

The H6510BD also surprises with the sharpness and detailing of its HD pictures, especially as shadow detailing remains high in dark scenes. In fact, it has the best black level response I can recall on a PJ for this money.

I'm talking in relative terms, of course. The H6510BD outperforms its rivals, but if pitted against more expensive DLP projectors its black levels look pretty average, motion looks slightly blurry, and there's some rainbow effect over bright image elements. Nothing here I'd consider a deal-breaker, though







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Mark Craven, Home Cinema Choice, April 2014



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Turn your Xbox into your TV hub...

...well, that's the idea of the new Xbox One Guide functionality. John Archer isn't convinced

THE LATEST WEAPON in Microsoft's campaign of UK living room domination is the launch of the Xbox One Guide, designed to persuade you to watch TV – from external Sky, Virgin, BT Vision, Freesat or Freeview receivers – through the console. Its main draw is a souped-up EPG offering such functions as finding alternative episode screening times, finding other episodes in a series, making viewing suggestions based on viewing histories, and seamlessly combining VOD services with

broadcast listings in search results. For instance, search for *Star Trek* and the results will include both broadcast options and episodes on Netflix, Blinkbox and the like.

The Guide can even change your STB's channel via HDMI, with further temptation to watch TV through your Xbox coming from content-adding apps like *Brazil Now*, which provided supplementary information on live World Cup matches.

Yet the system is hamstrung by two problems. First, running TV through a console

eco-system adds a layer of complication some family members will likely never get familiar with. The other massive problem is the interface. As with the Xbox One's dashboard, the Guide interface seems to assume you'll be using a Kinect and voice commands. You can even – supposedly... – do verbal searches for particular programmes. However, not all Xbox Ones now ship with Kinect, and even those that do are so poor at recognising voices that after just minutes of having your commands ignored or misunderstood you feel like hurling your Xbox joypad through your TV. Which isn't the sort of interactivity Microsoft had in mind •





ROBSON ACOUSTICS CHRONOS → Approx £1,300 each

The time has come for Chronos on-walls

These high-end on-wall speakers make an art of cinema audio, enthuses Steve May

THE BRITISH-MADE CHRONOS on-wall speakers are a revelation. Intended for use in both a stereo pair and in a multichannel setup, they boast extraordinary spatial imaging and have the presence of enclosures a magnitude deeper. They're also able to blend chameleon-like into their surroundings, as finishes can be tailored to fit. You can order bespoke grilles in a multitude of colours, or even painted. A gilt frame (pictured) is an option – alternatively you can go classic black.

The Chronos are deceptively large and reassuringly heavy. Under the grille sit a pair of 6.5in bass units and a ribbon tweeter. Delivery is smooth yet powerful. These drivers have that unique ability to seemingly disengage from the confines of their cabinet entirely. They work particularly well across the vocal band, but can reach deep (to 41Hz) when they need to, making them fine cinematic performers. They also relish serious amplification. If you are running a higher-end AVR with copious



power reserves, these on-walls will be happily driven without a shred of distortion or stress. The soundtrack of sci-fi flick *Oblivion* is rendered with appropriate bigscreen heft, the action thumping and visceral.

The on-wall Chronos cabinets measure only 10cm deep

That said, the ribbons have a crystalline quality that's equally well suited to hi-res audio. Admiral Fallow's *The Paper Trench*, a 24-bit/44.1kHz FLAC download from Linn Records, sounds almost three-dimensional while the Super Audio CD edition of *Ziggy Stardust*, in a 5.1 mix, proves deliciously immersive.

If you're looking for an audiophile speaker that doesn't claim too much room space, these positively demand an audition. A 5.1 array wasn't available to test, but I'd love to hear it

HCC VERDICT

Robson Acoustics Chronos → £1,300 each

Overall ★★★★★



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Top of the Pops



Popcorn Hour's A400 media player may be a touch idiosyncratic, but Martin Pipe is pleased to discover it handles nearly everything he can throw at it



You'll need to fit your own HDD to the A400 player

THE WHIMSICALLY NAMED Popcorn

Hour has a reputation for feature-rich multimedia players, and the A400 is no exception. It supports all key forms of 3D video, is HDD-upgradable, can be controlled via smartphone apps, offers an 'app market' and incorporates advanced video processing.

The elegant and compact black enclosure, designed by PC casemeisters Silverstone, rejects fans in favour of fairly substantial heatsinking. A lockable cradle arrangement allows a 3.5in SATA drive of your choice to be fitted. You can't install a PC-formatted (e.g. NTFS) drive containing the content of your choice. If you do, the disk isn't recognised until you reformat it (Linux EXT3 is employed) thereby erasing your files...

Installing the disk also kickstarts the process of downloading and installing the NMT software that provides networking functions (among them NAS and BitTorrent). Unfortunately, you cannot take the A400 to your PC and plug it in via USB (v3.0 is supported) so that files can be copied across. Windows just doesn't know what to do with EXT3-formatted devices; if you have a Linux

PC, though, all is well.

Windows users can.

however, use USB

intermediary; the

A400 allows files

to be transferred

and the fitted HDD.

You can also get

multimedia onto

the A400's drive

via your network.

between USB devices

storage as an

AV Info

PRODUCT: Comprehensive media player

OSITION: Below the C-series media tanks in Popcorn Hour's line

Dune HD Base 3D: WDTV Live Hub

Thanks to its dual-core Sigma CPU, the A400 excels in terms of file support, be it from a network (Ethernet as standard, Wi-Fi an optional £25 extra), fitted HDD, USB or side-mounted SD card slot. All I tried, worked. It's conversant with unencrypted ISO disc images (CD/DVD/BD - both 2D and 3D), DVD VIDEO_TS folders, MP3s, JPEGs, FLACs, WAVs, MPEGs and AVIs. 24-bit as well as 16-bit audio is within the A400's grasp, with sampling rates as high as 192kHz. Oh, and the A400 is the only non-audiophile player I've come across that knows what to do with SACD-type DSD files.

For 3D compatibility, the HDMI port is v1.4-compliant; composite and component analogue outputs are available too. Setup arrangements are comprehensive, and enthusiasts will appreciate the video engine's contrast enhancement and deinterlacing controls. Multiple aspect modes and zooms are available, and all standards and refresh rates (including 24p) catered for.

A few niggles

The user interface is attractive (in its Network Media Jukebox mode, there's a Kaleidescapestyle cover-art carousel, although its metadata skills aren't faultless) but not always intuitive. And while the downloadable apps include internet radio, Twitter and YouTube, there's no Netflix or catch-up services for British broadcasters.

Where the A400 really scores is in terms of AV performance. Varied colour palettes, smooth motion, striking resolution of fine details and a wide dynamic range make this one of the best performers on the market; the perfectly synced audio, meanwhile, should even satisfy the golden-eared brigade

SPECIFICATIONS

HDD: No. Fit your own choice of 3.5in SATA drive CONNECTIONS: Ethernet; 2 x host-mode USBs; 1 x device-mode USB; eSATA; HDMI 1.4; composite video; component video; coaxial and optical digital audio; stereo analogue audio; SD card slot

AUDIO FORMAT SUPPORT: MP3; WMA; AAC; M4A; OGG; TTA; APE; FLAC (up to 24-bit/192kHz); PCM/WAV (up to 24-bit/192kHz); DSD (2.8MHz); Dolby Digital/ DTS (5.1 passthrough); Dolby TrueHD (passthrough); DTS-HD Master Audio (passthrough)

VIDEO FORMAT SUPPORT: MPEG-1; MPEG-2, X.264/H.264 (inc MP4, MOV and MKV); WMV; ASF; XviD/DivX; AVI (SD/HD); MPEG-2 and H.264 TS (off-air); ISO disc images; VIDEO_TS DVD rips; 3D MKV/BD ISO; GIF/JPEG/PNG/BMP/

TIFF still images **DIMENSIONS:** 182(w) x 55(h) x 158(d)mm

FEATURES: Fanless case; backlit remote handset; Sigma SMP8911 dual-core processor; provision for onboard HDD with networking (e.g. SMB/NFS/uPnP NAS, BitTorrent, Usenet) functionality; copy between network/SD card/ HDD; playlists; video upscaling; zoom; VXP video processing engine; Android/iOS remote apps available; media carousel mode with metadata and search; apps market (including Shoutcast internet radio, Picasa, YouTube, Facebook, Twitter...); weather/time display; 1080p24; video output tracks source refresh-rate; photo slideshow; firmware updates via internet

HCC Verdict

Popcorn Hour A400

→£250 (without HDD) → www.my-htpc.co.uk → Tel: 011́33 229 496 HIGHS: Wide-ranging file support; plenty of features; fantastic AV performance LOWS: Jukebox carousel erratic (The Living Daylights presented as Full Metal Jacket...); internal hard-drive is non-Windows format; can get rather warm with HDD fitted





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DIGITAL COPY

Fed up with waiting for discs and not entirely impressed by Netflix, **Mark Craven** is pleased to discover there's a wealth of 4K content already lurking on YouTube

WHILE WE WAIT patiently for the Blu-ray Disc Association to put the finishing touches to a next-generation disc standard that will bring 4K content to our living rooms (my advice: don't wait up), it's often said by wizened CE journos that there's a shortage of 4K content. And this could be an issue for TV manufacturers. After all, having finally worked out how to cram a few million more pixels into an LCD screen, they're now hoping to flog them to wary punters tired of backing the wrong technological horse in the AV Stakes.

Others will argue that **the shortage of 4K content is wildly exaggerated**. After all, there's 4K Netflix. And, yes, there certainly is 4K Netflix, currently flaunting the political drama *House of Cards* and re-runs of *Breaking Bad*. While these TV series will please the US drama cognoscenti, it's not exactly a lineup that will gather the entire family around the gogglebox on a Saturday night.

Others still will counter that what 4K needs is over-the-air ultra-hi-res broadcasts of Hollywood blockbusters and Premier League football. The same twin towers of telly that helped sell HD, and tried, but failed, to sell 3D. And I'm sure Sky will eventually answer these prayers, but not without extensive trials and a hardware overhaul.

But wait! There is an alternative to non-existent 4K discs, sparse streaming content and a utopian satellite TV future. And it's to make your own.

Consider YouTube. This, I've discovered, is the ideal place to find 4K demo material, as people and companies have been filming and uploading their own. In fact, when faced with family and friends demanding I explain exactly what makes my resident 4K screen so exciting, and worthy of blocking all natural light into my living room by virtue of its hulking 65in chassis, I don't queue up

Kevin Spacey's political shenanigans on Netflix, I head straight to YouTube and let them bathe in the warm glow of the home-brewed footage that's been uploaded by ordinary people from their smartphones and cameras. In terms of content, some of it is admittedly rather bland – nothing more than outdoor footage shot on an LG G3 handset – but it provides a perfect example of the immediate benefits of 4K. It says 'Look, this is just like the amateur, uninspired material you record when you're on holiday – only it looks waaaaay better.'

So any TV manufacturer worrying that consumers aren't getting the idea about 4K needs to play up this DIY revolution. Remember the Top Up TV ads that highlighted a TV's CI slot with the phrase 'It's what the slot's for'? 4K is what your digital camera is for. And it's ready now.

I second the motion

On another note, this month I've had to re-evaluate my feelings when it comes to the various motionsmoothing technologies buried within modern flatscreen TVs. I used to think they were some of the most hideous ideas since the script for Police Academy 7: Mission to Moscow was signed off, but I'm beginning to be swayed. Why? Because I left my TV's frame interpolation 'On' one afternoon, forgot about it and went out. Later that night I received a text from Mrs C saying 'This TV's AMAZING!' Of course, I returned home thinking she was marvelling at the heightened detail, but realised it was the sumptuous smoothness (actually very free from artefacts) that was floating her boat. I guess, like the final Police Academy film, some people like it. I still switched if off, though ■

Are you already making your own 4K content? Let us know: email letters@homecinemachoice.com Mark Craven is now working on his own digital 4K short movie about a magazine editor who is convinced he looks like Jason Statham, but actually doesn't





FILM FANATIC

After being blown away by the television version of *Fargo*, **Anton van Beek** wonders which other movies could successfully make the leap from bigscreen to small...

LIKE MOST OTHER fans of Joel and Ethan Coen's darkly comic 1996 crime thriller *Fargo*, when the news first broke in 2012 that MGM Television and FX Productions were teaming up to turn it into a television series I was more than a little skeptical. Despite being of the belief that we're living through something of a 'Golden Age' for television drama, I couldn't conceive of a TV version of *Fargo* as anything other than a letdown; a pale imitation of one of the Coens' best films.

Having now seen all ten episodes of the show I'm happy to admit that I was wrong. Rather than remaking the film for the small screen, the TV series is more of a tonal companion to the original: keeping the same chilly locales and populating them with familiar but subtly different characters. Indeed, in a year that has also seen *Game of Thrones* go from strength to strength and *True Detective* mix murder and metaphysics to magic effect, I have no problem calling the bleakly funny and constantly surprising *Fargo* the year's best drama series by some margin.

Admittedly, this turn of events isn't completely unheard of. The likes of *M*A*S*H*, *Buffy the Vampire Slayer*, *Friday Night Lights* and *Stargate* all made a similarly successful transition to TV – in many instances actually improving on their bigscreen counterparts. But for every one of those there's a multitude of *Planet of the Apes*, *Working Girls*, *Casablancas* and *Ferris Buellers* to make you think that any such idea is doomed to failure.

However, the unexpected success of Fargo has left me convinced that (with the right talent involved) other films that I love could be reworked into a long-form serialized format with just as much success. So, with that in mind, here are the three that I would really like to see...

Blade Runner

While the idea of a hard-boiled sci-fi detective series has plenty of merit in and of itself, the big advantage in translating Ridley Scott's 1982 classic for TV is the way in which the long-form medium would allow viewers to explore more of the world the movie created. After all, the Los Angeles of 2019 depicted is almost a character in its own right, with most of its secrets still waiting to be revealed...

Mad Max

Just because Mad Max: Fury Road (starring Tom Hardy and Charlize Theron) is finally hitting cinemas next May, it doesn't negate the car-crashing franchise's obvious appeal as a TV series. The nomadic existence of Max Rockatansky and the episodic nature of the films are ideally suited to a TV show, while the extended running time could also dig deeper into the world-changing apocalyptic events that occur frustratingly off-screen between the first two movies.

The Thing

Make no mistake about it: John Carpenter's The Thing is one of my all-time favourites. Having watched it countless times over the decades, I believe it to be a flawless piece of cinema. Still, that doesn't mean I'm opposed to someone revisiting the material on the gogglebox. The recent sci-fi show Helix proved that it'd be easy to increase the scale of the story by setting it in a modern scientific research facility in the Antarctic, with the addition of soldiers, geneticists and virologists only ramping up the paranoia that drives the characters as they struggle to survive. Make it, and I promise to tune in

What films do you think would work as TV shows? Let us know: email letters@homecinemachoice.com Anton van Beek is still haunted by memories of the (mercifully) shortlived *Lock, Stack*... series churned out by Channel 4 at the height of the 'mockney' craze





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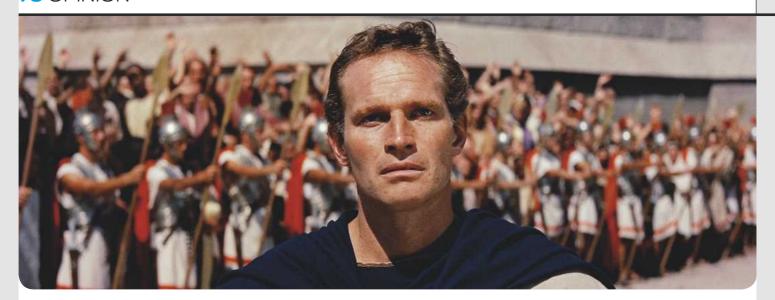








78 OPINION



THE INSIDER

In the first of a series of columns, ex-THX staffer and current Hollywood actor **Martin Dew** explains why driving to his local Atmos cinema feels a little like the chariot race in *Ben-Hur*

ALTHOUGH I CHOSE Ben-Hur as my favourite Blu-ray when opening up my cinema room to HCC readers in the last issue, I am not sure it is necessarily one of the ten movies I would take to a desert island. (I will, of course, have to assume there is an Oppo BDP-103D and a Panasonic plasma mounted to the trunk of an indigenous palm tree when I get there.) But I think most home cinema aficionados understand the difference between the creative merits of their top-ten films, and the video and audio merits of their top-ten discs — although, as in my case, there will probably be some overlap.

Ben-Hur in 1959 was unprecedented in production scale. It was precisely that bold and uncompromising approach to filmmaking – and its associated in-cinema presentation – which seemed synonymous with the American character, echoed today in countless Summer budget blow-outs.

As an ex-pat, I cannot help but draw on an analogy between America's spirited attitude to its movie-making and the fearlessness on display on a Californian freeway. So, it seems fitting to have to negotiate traffic mayhem every time I head out the 20 miles east from Studio City to Krikorian Premiere Theatres in Monrovia once or twice a month...

From your American history, you will know that the horse was replaced with various unwieldy gas guzzlers, but the average guy has now apparently settled on the hi-riser Ford F-150 truck. 'Lane discipline' is not a registered term in the United States; in fact, you will get some mighty weird looks if you go on about it at your local. On the tarmac, you'll find someone nudging your rear bumper on the inside lane, even though the other nine lanes are completely free of moving objects. By 3pm, the whole thing actually looks like the chariot race from Ben-Hur, except that rather than 12 steed-drawn

Charlton Hestons, this one has 17,000 cars in your rear-view mirror all doing 87mph.

Once there, and obviously needing a relaxing and comfortable air-conditioned seat, top of the bill at the Monrovia location is one of the region's only three Dolby Atmos rooms. I sat through *Transcendence* there a few weeks ago and, while it was no great shakes, it could at least boast that Johnny Depp had finally dropped the white-powder face and bad English accent. But of far more interest to me was the sound presentation. The matrix of ceiling channels was used sparingly and effectively, but the dynamics were earth-shattering.

Advancing audio

I was recently chatting to a friend of mine at Technicolor and, after remarking that **film sound seems to have powered into overdrive in just the last seven years or so**, he told me it's a direct result of a new generation of studio mixing desks and a now complete digital workflow. Blu-ray authoring has evolved into a precise science, too – check out the violent, raw, sonic power of discs like *Thor* or *Pacific Rim* in the home. (The majority of California homes are wood-framed, so the actions of a subwoofer and the rumblings of the San Andreas Fault can be worryingly interchangeable.)

Generally, I am no comic book or studio tent-pole movie fan. Summer blockbusters literally fly over my head and, to me, look synthetic and sound overproduced. I always think they are really made for all those guys driving their Ford F-150 pickups, but sometimes you have to take a step back and admire the sheer bombast and ambition of modern high-budget American cinema

What ten Blu-rays would you take to a desert island? Let us know: email letters@homecinemachoice.com UK-born Martin
Dew trained as an
actor but ended up
working for
Lucasfilm THX and
then NEC in the
US. Now, though,
he's back in front
of the camera





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^{*} The 2014 range of JVC D-ILA Projectors consists of model numbers DLA-X900R, DLA-X700R, DLA-X500R. Visit www.jvc.co.uk for more details.

^{**} Contrast ratio specifications are for the DLA-X900R.

Feedback

Got an axe to grind? Need to comment on current technology? Want to share your knowledge with our readers? **HCC** is here to help

TVs need external speakers

Richard Stevenson's article (*Point of View, HCC* #235) regarding poor sound quality struck a chord (in F Sharp to be exact!). It should indeed bother us that the sound out of the current generation of flatscreen TVs is so bad that it has us asking friends and family: 'What did he say that time?' or 'Could you make out what they were saying?'

If manufacturers even provided the simple expedient of allowing external loudspeakers to be attached it would make a big improvement. For example, we have a 22in (LG) set in the bedroom and the sound quality is so poor that it sounds distorted to my ears. I fitted two 3.5mm jack sockets (see photo) to bypass the



internal speakers and the result, while not up to hi-res standard, is a huge enhancement. Despite voiding the benefit of the warranty this is an upgrade well worth doing and even a modest pair of

two-way speakers make a substantial improvement to the sound quality and soundstage.

Such a facility can do away with the need for soundbars and that extra remote. HDMI cable

and yet another plug in the extension lead.

As George Lucas says, a film is half vision and half sound! David Murphy, Dublin

Mark Craven replies: That seems like an innovative solution, David - particularly as I imagine the audio performance of a typical 22in TV isn't up to much (I'll admit I haven't seen/heard one of those diddly sets in ages). There are some exceptions to the general 'modern TVs sound so bad' rule, however. Sony's KD-X9005B models are a case in point, using good-size front-facing drivers mounted on either side of the screen to deliver worthwhile sonics with some genuine bass response

★ STAR LETTER...

You can't ignore acoustic science!

It makes no sense to use calibration software like Audyssey MultEQ on your receiver and then claim that the science of acoustics never works in practice [You'll be referring to Richard Stevenson's Point of View column, HCC #234 - Ed]. In fact, I believe that a room's acoustics have a larger impact on sound quality than the AV hardware within it. I bought a centre speaker with fantastic imaging after a demo but when I put it in my living room it sounded quite average.

Now that I'm in the process of building a dedicated cinema room (6m x 5m) I want to ensure the room's acoustics are as good as I can make them. Like a good recipe, no amount of garnish or presentation after the fact is going to save it if the

basics aren't right to begin with. For me 'the basic's means starting with an acoustic calculator to choose the room's proportions before it's built. And after it's built, I'd like to use a microphone and (free)

software to finetune the room with absorbers and diffractors.

No one can argue with one person's subjective assessment of what sounds fabulous and what sucks, but for my money I plan to use the science of acoustics as a solid

foundation for my cinema room. Ion Mitchell, via email

Richard Stevenson replies:
Okay, okay — you've got me.
Perhaps my column shouldn't
have been quite so disparaging
regarding the science of



soundwaves and room geometry. As you say, these 'basics' are a key part of ensuring good-quality acoustics before you even get into after-the-horse-has-bolted treatments. But as I said, my personal experience suggests they aren't the be-all-and-end-all. Other factors, including furnishings and hardware, come into play.

It's great to see you're planning your cinema with such care Ion. Be sure to keep us up-to-date with the project!

Star letter-writer Ion wins a Need for Speed goody bag containing the Blu-ray as well as a clock, T-shirt, keyring and USB stick. Need for Speed is out now on 3D Blu-ray, Blu-ray and DVD courtesy of EntertainmentOne.



(and Sony has a compatible wireless subwoofer available to provide even more grunt). Of course, the downside is that it makes these Sonys considerably larger in terms of width compared to an equivalent set from another manufacturer (not to mention a bit chunky courtesy of the 'Wedge' design cabinet). But the pros far outweigh the cons.

I also know of at least one other brand that is investigating the idea of separate optional subwoofers for TVs, so perhaps we are seeing flatscreen manufacturers begin to sit up and take notice of this consumer backlash.

I'm doing away with DVDs

I want to thank Mark Craven for his opinion in *HCC* #234; he has given me the solution for my DVD/BD rack which had almost no free space. Now I have removed more than 30 DVDs which I also had on BD and would never have again watched in standard-def when I have the HD version to put on my projector screen. And as some were the *Lord of the Rings* extended versions I have gained a lot of space for new Blu-rays!

But there are some DVDs I have to keep, because the BD only has the movie and no extras (Cast Away) or just not as many (Bourne Ultimatum). And sorry Mark, I'm not planning to take your copy of The Waterboy. Patrick, Belgium

Mark Craven replies: Glad to be of service, Patrick. I'm interested that you feel the need to hold on to DVD versions because of their extra features — I sometimes assume that no one watches extras any more! Would love to hear from other readers about their favourite Blu-rays/DVDs in terms of extras.

Children of Men rocks!

I really enjoyed the Demo Screen feature in the last issue (*HCC* #236). A great read and really interesting and it's made me go back to my disc collection and rewatch some of the titles suggested by yourselves.

Which brings me on to Children of Men. I agree that this has a fantastic soundmix – the final sequence truly sounds great through my Monitor Audio speakers and Denon AVR – but the visual effects are perhaps even more impressive. [Director] Alfonso Cuaron creates 'singletake' sequences (with the help of computer effects, of course) that are utterly jaw-dropping – especially when you realise

after four or five minutes that the camera has never changed. *Gravity* was equally impressive, and I have been using its opening sequence to demo my setup. It's just a shame that he doesn't make more movies! *David Belton, via email*

Anton van Beek replies: We're big fans of Cuaron at *HCC*, but you're right – he doesn't make anywhere near enough movies. In fact, he's made three in the last ten years – one Harry Potter sequel, *Children of Men* and *Gravity*. Neither does he seem to have much in the pipeline at the moment, having been busy as executive producer/creator on TV series *Believe*.

Shall I wait for OLED?

I would like to ask your thoughts on the future of OLED TVs and if you think they will succeed. There has been a lot of talk on the internet regarding the longevity of the blue pixel, and it deteriorating quicker than the red and green ones. Screen burn also seems to be an issue and the fact that they are difficult to manufacture contributes to their expensive price tags. The worrying thing is the Sony and Panasonic partnership to produce OLED panels broke up in December last

year and now Samsung is taking a step back from producing its panels. Does it know something we don't? This only leaves LG manufacturing OLED, which surely will keep the prices up for the foreseeable future.

Having recently purchased a Panasonic ZT65 plasma for its black levels, I see OLED being crowned a successor in terms of beating those black levels, but will OLED live or die or will we see an LED/LCD future now that Panasonic no longer makes plasmas? (And it has made a bold claim that its future AX902 range will be better than the plasma in black levels terms). Not forgetting that Sonv and Samsung are pushing their 4K TVs at ever-lower prices, making OLED purchases less important to most consumers. Do I buy the Panasonic AX902 if it is as good as my plasma with the added 4K >

CONTACT US...

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Please note: we cannot guarantee to print/answer all the letters we receive. Sorry.

resolution or do I wait two or three years to see if OLED succeeds? I really don't know! Philip Bowers, via email

Mark Craven replies: Despite being around for yonks, OLED technology is still in its infancy as far as largescreen displays are concerned, and you are right that there are issues surrounding its production that have contributed to the high cost of domestic displays. The main issue would seem to be yield rates - essentially, many of the panels manufactured have technological or physical issues that mean they're not fit for use. This has been reason enough, seemingly, for Sony and Panasonic to can its jointventure. LG Display, on the other hand, has been more successful in OLED production (using proprietary WRGB technology that claims to limit the impact of pixel deterioration), and as such LG stands proud as the market leader (albeit in a market of one).

You say you're the owner of a high-end Panasonic ZT65 - a cracking TV, but not 4K. So should you swap it for the brand's incoming (at IFA) AX902? That depends. Panasonic is, of course, likely to say it has achieved plasma-like blacks with its new LED, but that remains to be seen. A brief initial demo that we had at Panasonic's European convention in April arguably showed the ZT65 still on top in pure black terms but the 4K LED AX902 naturally impressed in other areas.

If you really want to get a 4K display why limit yourself to Panasonic? Perhaps wait until the AX902 is out and then get demos of it and rivals from Sony, Samsung and LG.

OLED remains exciting because it combines selfemissive technology and fast response times with high contrast and a super-slim form. But it looks certain to remain a niche TV category for the foreseeable future ■



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The LEGO® Movie 3D

The first-ever full-length theatrical LEGO® adventure is now available to buy on Blu-ray 3D™, Blu-ray™ and DVD - and thanks to Warner Bros. Home Entertainment we've got

five copies of the Blu-ray 3D™ up for grabs...

Ouestion:

The LEGO® Movie actors Chris Pratt and Nick Offerman currently co-star in which acclaimed television comedy series?

Answer:

A) The Big Bang Theory B) Modern Family C) Parks and Recreation

Email your answer with 'The Lego Movie' as the subject heading – and include your postal address!



The Raid 2

Bigger and better than its predecessor in every way, this ultra-violent action sequel is a must-see for martial arts junkies. To celebrate the Blu-ray and DVD release of The Raid 2

on August 11, EntertainmentOne has given us five copies of the Blu-ray to give away...

Ouestion:

What is the name of the Indonesian martial art that features heavily in both The Raid 2 and its action-packed predecessor?

Answer:

A) Ecky Thump B) Silat C) Capoeira Email your answer with 'The Raid 2' as the subject heading - and include your postal address!



Under the Skin

This unforgettable sci-fi flick

stars Scarlett Johansson as a man-hungry alien and is available now on DVD and Blu-ray. Thanks

to StudioCanal we've got five copies of the Blu-ray and the soundtrack CD up for grabs...

Ouestion:

Under the Skin director Jonathan Glazer also helmed which modern gangster classic?

A) Gangster No. 1 B) Mickey Blue Eyes

C) Sexy Beast

Email your answer with 'Under the Skin' as the subject heading – and include your postal address!

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84 READER'S ROOM



Rock 'n' roll cinema

This high-end home theatre features custom-made speakers using granite enclosures. Proud owner **Terence Stamp** explains why he loves taking control of his own audio

Introduce yourself...

I'm Terence Stamp, 40 years old. I'm a landscape gardener, working in my own business in Australia.

How long have you been into home cinema? Do you remember the first AV setup you had?

I have been into hi-fi since I was six and blew up my Dad's speakers from playing them too loud! I tried building my first set of speakers when I was 12 – total fail. My system transitioned from hi-fi into a home cinema setup when I purchased the Denon AVC-AI 5.1-channel amplifier back in 2001. At that stage my cinema consisted of the Denon amp,

Denon DVD-3000, Denon POA-T3 three-channel amplifier, a Denon TU-S10 AM/FM tuner and a Loewe television. The speakers I built myself.

My home cinema has gone through many upgrades over time – at different stages I have had the Denon AVC-AISRA, Denon POA-S10 monoblocks (three of them), Denon DVD-



2800, Rotel RB-1090 stereo amplifiers and the Rotel RMB-1095 multichannel amplifier. I installed a PJ in 2006, an InFocus.

Whereabouts in your house is your cinema room?

My home cinema took over the living room...

Okay, so what's your current setup?

A Denon AVR-4520 for processing, and a Denon DBT-3313UD universal Blu-ray player. Then there is a Rotel RB-1090 stereo amplifier (to drive my subwoofers), two Rotel RB-1592 stereo amplifiers (for the front speakers only), and a Rotel RMB-1095 five-channel amplifier (for centre, rears and rear surrounds). I'm running a 7.2 speaker array (but have had up to 10.3 in the past) and all the speakers were built by myself, except the centre speaker which is a Monitor Audio GX and the rear surrounds which are Monitor Audio GS60s. I have over 70 metres of Van Den Hul Magnum speaker cable, plus other Van Den Hul interconnects.

The projector is an InFocus 3D model, aimed at a screen I made myself.

Additionally, I have a Pro-ject RPM10 turntable with Denon DL304 cartridge, and a Pro-ject Tube Box SE II pre-amplifier for the turntable.

What's your opinion of the system's performance? What do you really love about it, and what areas, if any, do you think could be improved?

The problem with designing and building your own speakers is that you can always find



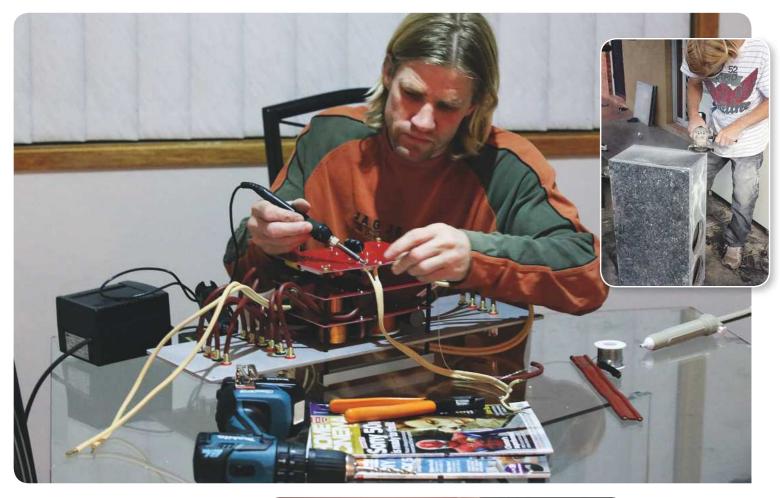
AV-Holic Terence Stamp has been building his own speakers since he was only twelve years old

improvements to make. Whether it be new drive units, upgrading crossover components, getting extra amplifiers — even rebuilding the room to improve acoustics. It seems the more I improve it, the more things I find wrong. It could be psychological, as I am not happy but everyone else says they have never heard a better system.

The biggest weakness in my AV setup is the InFocus 3D projector. Although it does really good 3D with great 3D effects and colour saturation (*Finding Nemo*, for instance), it really struggles with normal 2D and I find myself having to re-calibrate all the settings for each movie to get a decent picture.

Sound-wise, the speakers I built myself, it's the best sound I have ever heard – and





that is comparing them against other reputable speakers such as Monitor Audio's Gold GX series, Dynaudio's Confidence C4 and Bowers and Wilkins' 802SEs.

The whole system setup has a soundstage that immerses you in the movie. The twin Focal 18in subwoofers produce sufficient low frequencies to induce nauseousness – and are also quite good at removing plasterboard from the ceiling. Great dynamics and control – I have measured a peak of 136dB in the listening position when playing The Prodigy on vinyl!

My one love in my setup is my front speakers. It's taken a long time to achieve them and many versions to get it right.

So, on to the speakers: why did you decide to build your own?

I built my first pair of speakers because I didn't have the money to buy what I wanted! I used second-hand MDF and drive units from old speakers to configure them into something I could use. Over time I've learnt 1,000 ways not to build a pair of speakers, and new ways to refine and improve the overall configuration. This has included experimenting with port lengths, transmission lines, crossover configuration, cabinet construction and even internal speaker cabling.

The crossover has been the hardest part to get right. It's very complex and no one



Hard at work, with some copies of HCC for company...

The projector screen is custom-made. It currently combines with an InFocus HD PJ, but Terence is hoping to add a 4K model

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88 READER'S ROOM

mathematical equation can take into account the room acoustics and my own hearing response.

The best thing about the speakers is that they are now very flexible. I can run one speaker with one amplifier, or, if I won the lottery, they have the ability to be run with eight separate amplifiers or even fully active.

Where did you source drivers, crossovers from, etc? How long did it take you to build them?

The drive units I have sourced in many different ways. The Dynaudio drivers I use in my front speakers I sourced from the Dynaudio car audio range, from the Australian distributor – this has included the 8in and 5.25in drive units and the Esotar tweeters. The Focal 18in drivers in my subwoofers are also from a car audio range. I have also used drive units from speakers that I have bought. My rear speakers use drive units culled from Monitor Audio GX300s, which I have re-configured for my own purposes.

The crossovers I designed myself and had them manufactured by a local company. The crossover boards are layered with copper, silver and then a layer of gold, with a red solder mask. The crossover components I sourced from Solen and Mundorf online and the Van Den Hul cable connecting the crossovers to the drive units I bought from my local hi-fi store.

The granite was sourced from a range of different granite suppliers and the MDF from the local hardware store. The final gloss black finish was done by a friend who is a professional spray-painter.

My front speakers I have built and then re-built four times already, over a period of six years, each time changing drive unit configuration, enclosure construction and



even the sizes of the cabinet. My current set I built up over a period of about eight months, mainly waiting for suppliers to come up with the materials.

Talk us through the drivers used...

My rear-channel speakers consist of the C-CAM 6.5in midrangers and the ribbon tweeter from the Monitor Audio GX300s, a Dynaudio Esotar tweeter T330D, plus an additional Dynaudio 12in low-frequency driver, which is side-mounted, and crossed over at 90° out of phase. This is coupled to a quarter-length transmission line which is ported at the rear of the speaker, therefore putting the low frequency back into phase. I managed an efficiency of 92dB/W/M, 190W power handling and a frequency response of 26Hz-60kHz. The C-CAM drivers make for very good midrangers when incorporated in a home theatre.

My front speakers are 94dB/W/M, 600W power handling and a frequency response of 24Hz-30kHz. The input terminals are



constructed from 8mm aluminium. Bridging cable is Van Den Hul's The Magnum. The internal speaker cable is Van Den Hul The Magnum to the bass drivers, and Van Den Hul CS122 to the midrange and tweeters. I have previously experimented with a variety of internal cable to the tweeters, including sterling silver, fine silver (99.9 per cent) and gold-plated fine silver. It was an expensive way to connect a tweeter but definitely worthwhile. I selected Dynaudio drivers for my main speakers as I love the way that they reproduce music, especially vinyl. Anyone that has heard Kate Bush, Katy Perry or even Lily Allen on vinyl will never ever go back to CD (let alone MP3) after hearing it through these speakers!

My subwoofers are 96dB/W/M, 1,000W continuous power handling with a frequency response of 24Hz-100Hz (LFE amplifier crossover point).

Why have you used granite cabinets?Granite has a couple of advantages in cabinet

FISHY BUSINESS IN 3D

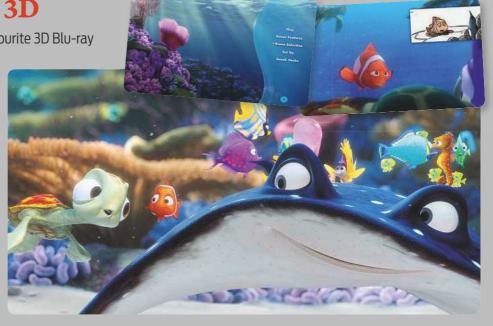
Finding Nemo ranks as our AV-Holic's favourite 3D Blu-ray

What discs do you use to show off the system to your visitors?

Any Marvel movie – *Iron Man, The Avengers, Thor, Captain America* – mainly due to the action sequences and dynamics. To show off my system's picture quality, I usually use *Elysium* or *Gravity* – some of the scenes of these movies are a work of art.

In 3D, *Finding Nemo* is fantastic. It really shows off the home theatre as its best – I love watching this with my five kids. Then there's *The Hobbit* and *Avatar*. It is hard to pick a favourite, though: there are far too many excellent movies to choose from.

I must note that the only movie ever to trigger the protection in the amplifiers was *Moulin Rouge* – that movie has huge dynamic range!





Far left: The room uses two custom-made subwoofers with 18in Focal drivers – and 'exotic' artwork on the top panels

Left: Terence has even gone to the trouble of adding his name to his speakers' circuit boards

Near left: Rotel power amps provide the necessary muscle

Right: Internal speaker cabling comes from hi-fi marque Van Den Hul



construction. Firstly, it breaks up resonate nodes due to the rough internal side. Secondly, its mass means it doesn't transfer energy to the enclosure.

The speaker enclosure is a mix of granite and MDF. The main speakers use 36mm MDF and the subwoofers use 50mm MDF. The MDF is a dampening factor for the granite

a fully granite enclosure would suffer ringing due to its fundamental resonance.
 The granite is fully integrated into the enclosure – it's not cladding. Granite is also a natural rock and has a beauty of its own.
 I mainly use Blue Pearl granite in my speakers due to its large crystal structure.

My front speakers – which I have named 'the Monolith' – are constructed from three separate chambers bolted together, and include internal ports from top to bottom to increase the total volume of the enclosure. This not only increases the efficiency of the drivers, it also lowers the frequency response.

Is this something you think other AV-Holics could attempt themselves?

Other AV-Holics could attempt this themselves if they are ambitious. It's taken me over 15 years to get to this stage and I've gone through many speakers and numerous drive units. Building your own speakers can be incredibly frustrating but incredibly rewarding when it goes right. You need to be prepared for many failures and start from scratch again and again. And have a *really* understanding wife...

The speakers are quite serious-looking, but you subs feature custom artwork...

Yes – both my 18in subs have custom airbrushing on them. I was going through a stage where most of my speakers had art work on them. The subwoofers were a good size to have artwork as the enclosure is quite large to allow it to accommodate the Focal multi-stack magnet drive unit. I have to note that one of the pictures on the subwoofers is of Anne Duffy – a well known nude model in Australia, also a friend.

Roughly how much have you spent on your cinema room?

The current setup you see here has cost around 70,000 Australian dollars, including getting a dedicated line from the electrical box for just the home theatre. The learning curve to get to this stage (over the last 20 years)

probably adds another 40,000 to that (trading in components and selling other speakers).

So what do friends and family think of the system?

My children absolutely love the system and showing it off to their friends. My wife has

'It's taken me over 15 years to get to this stage and I've gone through many speakers and drivers'

contributed loads of time and money into the cinema room and is very happy to sit down and watch hours of *Game of Thrones* on the big screen.

Do you watch any movies/TV from download/streaming sites?

 $\mbox{l'm}$ not a fan of downloading movies as \mbox{l} find the quality suffers.

What's your favourite bit of kit, and why?

It has to be my front speakers – they were a labour of love and I am very happy with the way that they have turned out.

Lastly, what's next on your AV equipment wishlist?

I am planning to build some front wide speakers to expand the soundstage. Other than that, I suppose a 4K 3D projector would be nice...

BE IN HCC!

EMAIL US: If you want to share your home cinema setup – big or small – with other *HCC* readers, email a selection of hi-res pictures (including one of yourself if you want) to letters@homecinemachoice.com with the subject heading 'AV-Holic', and we'll be in touch.



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Want to add some decent audio-visual excitement to your bedroom? This setup is made for you...

Sony's bargain-priced BD deck sports a compact form factor

Kit list: Sony BDP-S5200: Philips Fidelio HTL9100: £600 Samsung UE40H6400: £650 £180 Sanus VMF322-B2: £150 Echostar HDT-610R: £1.690

Total:





1. Blu-ray player

Sony BDP-S5200

Grabbing itself a spot in our bedroom system is this affordable disc-spinner from Sony, in part because of its compact form factor. Eschewing a full-width design, the BDP-S5200 measures only 26.5cm wide, and it strives hard not to look like just another black AV slab, either. With its angular top plate, you might even be able to pass it off as a jewellery box...

'There's no reason to stick to vanilla stereo in your boudoir, even if running speaker wire everywhere might not be an option'

A net-connected deck (via Wi-Fi) many of its Smart skills are matched by our Samsung flatscreen, but it does bring a cracking selection of PPV movies to the party via Sony's Video Unlimited platform. Video performance of this £110 player is glitch-free, and it's fairly speedy in use, too.

Also consider: Panasonic DMP-BBT01

This square-shaped 2012-era deck continues the quirky design theme, with vertical orientation a possibility thanks to its multipurpose stand.

2. Speakers

Philips Fidelio HTL9100

There's no reason to stick to vanilla stereo in your boudoir, but at the same time it's likely that running speaker wire around the nightstand isn't an option. What you need is a soundbar with a penchant for authentic surround sound.

Philips' Fidelio HTL9100 fits the bill. Stablemate of the E5 system reviewed in this issue (p64), it can be run in either a straightforward soundbar-plus-wireless subwoofer configuration (with the woofer being of the tall-'n'-thin variety, thus easier to tuck away) or, via its detachable end speakers, as a surround system with those extra cabinets running off internal, rechargeable Lithium polymer batteries.

terms of system integration. Bluetooth streaming caters for music playback from phones/tablets/computers and its HDMI

output provides Audio Return Channel (ARC) compatibility, minimising cable clutter with our chosen flatscreen. One of its HDMI inputs will go to our BD player - the second can be left spare for other sources (perhaps a games console for late-night shoot-em ups).

Its sound is characterised by punchy, thrilling bass from the subwoofer, clean dialogue and vocals and an involving surround performance courtesy of those detachable L/R speakers. And design-wise. its curved cabinet

is achingly cool.

Also consider: Sony HT-ST3





3. TV Samsung UE40H6400

With flatscreen bezels becoming ever thinner, where you may have once thought a 32in TV was the limit for your bedroom you can now go larger without upsetting the feng shui. Step forward Samsung's £650 40in Series 6 model. With its translucent edging and X-shaped desktop stand, it should perch on your second-room furniture without fuss.

As one of the Korean corp's mid-range models, the UE40H6400 misses out on some high-end processing tricks (and naturally sports a Full HD rather than 4K resolution) but its picture performance is up to scratch. Sharpness, rich colours are a healthy retention of detail with motion are the order of the day here, while the likelihood of this

Samsung being viewed straight on in a bedroom environment negates any off-axis issues. Similarly, its biggest flaw – crosstalk-infused Active 3D – will probably be irrelevant.

Extensive connectivity includes four HDMIs and three USBs (handy as our system doesn't feature an AV receiver to oversee sources) and integrated Wi-Fi (handy as you aren't likely to have your router nearby). And there's enough Smart features here to mean you don't need to worry about an external media player.

Also consider: Sony KDL-42W705B

Another mid-range LED TV around the ± 600 price point, this Bravia again boasts a sleek design, and majors on a great black level response.

AND ADD THESE...

Grab these accessories for an effective system boost

LightwaveRF Connect



Introduce some phone/tabletcontrolled lighting to your bedroom with this affordable range (available from Screwfix, amongst other places) of retrofit switches, sockets and Smart bulbs.

A TV bed!



Keep the TV out of sight when not in use with a bed that incorporates an electric lift system for your flatscreen – UK retailer TVBeds has a wide range, with prices ranging from £600 to £5,000.

4. Wall-mount Sanus VMF322-B2

Add some hotel-room chic to your bedroom system with a dedicated, flexible wall-mount. This £180 model from specialist Sanus supports screen sizes from 32in-50in (up to a weight of 27.2kg) and conforms to the VESA mounting standard.

Its profile is 35mm, meaning you should still get that flat-to-the wall TV look, but as a 'full-motion' bracket the Sanus allows for vertical (+/-10 degrees) and horizontal (90 degrees left/right) alignment, so angling the screen to the optimum viewing angle is possible. Installation requires a drill and a modicum of common sense.

Also consider: Logik LFM11X

Keep costs low with this fixed-frame TV bracket from budget brand Logik. Again VESA certified, it sells for a paltry £40. No tilting or angling here, though.

5. PVR

Echostar HDT-610R

The Samsung TV packs its own Freeview tuner, and you could rely on USB recording for casual time-shifting, but Echostar's HDT-610R provides twin-tuner recording in an ultra-slim chassis (just 14mm deep) that you can hide almost anywhere. Launched at £260 a while back, this 500GB HDD model is now available for around £150 – it offers little in the way of bonus multimedia features, but the important stuff (series linking, etc) is all here.

Also consider: Sky Multiroom/Virgin Multiroom

Got a satellite or cable subscription? Both Sky and Virgin allow an additional set-top box to be added to your bundle. Pricing varies depending on the hardware you go for and your original contract, and you'll need to run extra cabling to your bedroom, but it's the best way to get all your channels.

NEXT ISSUE...

STEALTH 5.1 ARRAY:

We enjoy surround sound that you can see but not hear with some start-of-the-art in-wall speakers and bespoke AV furniture

FILM FRANCHISE

Die Hard

Bruce Willis' resourceful cop proved you don't need massive muscles to be an action hero



No socks. A pack of cigarettes. This is all it took Detective John McClane (admittedly with the help of a borrowed machine gun) to foil Hans Gruber's hostage taking-cum-robbery in the box office 1988 smash Die Hard. While contemporary leading men Arnold Schwarzenegger and

and sported bulging biceps, Bruce Willis' hero had to rely on his wits (and wit) to save the day.

> This gentle evolution of the action genre is what makes *Die Hard* so appealing. McClane is certainly an action icon, but also a regular Joe – so when he ties a fire hose around his waist and leaps off a skyscraper, there's a nagging suspicion that he might end up

movie – both a critical and commercial success – was a true breath of fresh air.

Naturally, sequels followed. Die Hard 2 placed McClane within the somewhat looser confines of an airport; Die Hard With a Vengeance dumped him in downtown New York city. Of course, the franchise scriptwriters were hindered by the fact that rival movies were riffing upon the Die Hard premise. The Steven Seagal vehicle *Under Siege* was widely known as 'Die Hard on a Boat', and the

Sylvester Stallone were





mega-hit Speed was, for much of its running time. 'Die Hard on a Bus.'

After a 12-year hiatus, McClane returned to screens in 2007's Live Free or Die Hard (or Die Hard 4.0 in Blighty) armed with a teen-friendly PG-13 rating. Following a fan backlash, the fifth flick in the franchise reverted to an R rating - except in the UK where it was censored to hit 12A. That such interference with the series' appeal (McClane has a profane catchphrase, after all) hasn't dampened talk of a sixth movie is testament to how much we all love it.

PICK OF THE BEST...

Die Hard The 1988 original, directed by John McTiernan, is a bona fide classic. Everything is pitch perfect, from Bruce Willis' portrayal of cop McClane and Steven de Souza's tight script, to McTiernan's handling of the action scenes and Alan Rickman's cool menace in his feature film debut. Watch it on Christmas Eve and it's even better.

Die Hard 2: Die Harder A gap of only two years separates this sequel from its predecessor, but the script here is still rock-solid. The villains are perhaps a little more by-the-book, but McTiernan again impresses with his set-piece delivery. Our favourite – the climatic fight on the wing of an aeroplane.

Die Hard With a Vengeance Willis was teamed up with post-Pulp Fiction hot property Samuel L Jackson for this third franchise entry that, while likeable, suffers a touch from a lack of real thrills. Jeremy Irons – as Hans Gruber's brother! - steps up to fulfil bad guy duties.

AND THE WORST...

A Good Day To Die Hard

While Willis is by no means too old to play the action icon, John McClane's 2012 return is largely forgettable, with a Russian-bound plot that misses out on the brutal simplicity of the 1988 franchise originator and relies upon a succession of highly improbable explosive sequences for McClane to miraculously escape from. Not Hollywood's finest hour.

COLLECTIBLES

Some extra bits and pieces for die-hard Die Hard fans...

Nothing Lasts Forever



Didn't know Die Hard was based on a novel? Pick up this 1979 thriller from American crime writer Roderick FOREVER since 2012. Thorp, which has been back in print

NECA Cult Classics 3 John McClane action figure



Okay, so the likeliness of in this 10in-high figure is a little off – McClane looks more like middle-management than a tough cop – but at least he's toting the blood-soaked white vest. About \$40.

Now I Have a Machine Gun Ho-Ho-Ho hoodie

Relive the moment when McClane sends a dead 'terrorist' back to his bosses with a message on his sweatshirt. This hoodie is available from



Spreadshirt, via Amazon, for £30 approx.

Yippee Kay-Yay Ceramic Travel Mug

Online retailer Cafe Press stocks a wide range of unofficial Die Hard-themed merch, including



clothing, calendars, toiletry bags. babies' bibs and – indeed – ceramic travel mugs. Ideal for slurping a cafe latte while crawling through an air-conditioning vent.

THE ULTIMATE COLLECTION...

Happy trails. *Die Hard* fans – there are plenty of BD and DVD options available

Die Hard

(All-region BD)

Die Hard: Special Edition (Two-disc R2 DVD)

Die Hard 2: Die Harder (All-region BD)

Die Hard 2: Die Harder: **Special Edition** (Two-disc R2 DVD)

Die Hard With a Vengeance

(All-region BD)

Die Hard With a Vengeance: **Special Edition** (R1 DVD - US import)

Die Hard 4.0 (Region B BD) A Good Day to Die Hard

[Harder Extended Cut] (Region B BD)

Die Hard Quadrilogy [Die Hard/Die Hard 2: Die Harder/ Die Hard With a Vengeance/

Die Hard 4.0] (Region B BD)

Die Hard Legacy Collection [Die Hard/Die Hard 2: Die Harder/Die Hard With a Vengeance/Die Hard 4.0/ A Good Day to Die Hard] (Region B BD)

Die Hard: 25th Anniversary Collection [Die Hard/Die Hard 2: Die Harder/Die Hard With a Vengeance/Die Hard 4.0/ A Good Day to Die Hard] (Region A BD – US import)

The Die Hard 1-5 Collection Bundle [Die Hard/Die Hard 2: Die Harder/Die Hard

With a Vengeance/Die Hard 4.0/A Good Day to Die Hard] (Region A BD/R1 DVD

– US import)

Technical Company of the Company of



PROFIGOLD PROV1200 SERIES

Features: Profigold HDMI interconnect with up to 17Gbps bandwidth.

- High Speed HDMI interconnect with up to 17 Gbps bandwidth for extreme display performance
- Follows the HDMI directives for superior 3D image resolution up to 4k x 2k
- Audio Return Channel for High Definition 7.1 digital surround on your Home Cinema system.

Available in 6 lengths:

PROV1200 0.5m £22.49 PROV1201 1m £26.99 PROV1202 2m 31.49 PROV1205 5m £69.96 PROV1210 10m £149.99 PROV1215 15m £179.99



PROFIGOLD PROI3400 SERIES

iPod hi-fi audio cable, potable audio interconnect, 3.5mm to 2 x phono RCA.

Features: Profigold iPod hi-fi audio cable for portable audio and mp3 players.

- Superior grade 99,996% Oxygen Free Copper conductors, for lowest possible signal loss.
- Multiple cable shielding, for maximum protector against radio frequency interference.
- 24k hard gold plated contacts for excellent protection against corrosion

Available in 3 lengths:

PROI3401 1m £14.31 PROI3402 2m £20.18 PROI3405 5m £26.99



PROFIGOLD PROA5600 SERIES

Digital Optical Cable - TOSLink.

Features: Profigold toslink male to toslink male digital optical cable.

- Pearlised chrome plated metal connector with metal inner case.
- Superior flexible outer cable jacket.
- Solid black coated non-reflection jacket

Available in 4 lengths:

PROA5601 1m £15.31 PROA5602 2m £18.88 PROA5603 3m £19.39 PROA5605 5m £20.42

PLAYBACK

→ SOFTWARE HIGHLIGHTS NEED FOR SPEED 3D Does this stereoscopic racer make the chequered flag or end up stuck in the pits? LONE SURVIVOR Mark Wahlberg joins the Navy Seals THE RAID 2 Action sequel sets out to batter your home cinema into submission A HARD DAY'S NIGHT Beatlemania hits Blu-ray as the landmark musical celebrates its 50th anniversary AND MUCH MORE!





The cars are the real stars here

Fast & Furious clone delivers great vehicular thrills but struggles when the cars aren't on screen

→ NEED FOR SPEED 3D

When his best friend is killed during an illegal street race, brooding mechanic Tobey Marshall (Aaron Paul) has only one thing on his mind: revenge. So Marshall borrows a retooled Ford Shelby Mustang and sets off across America to get an invite to the exclusive winner-takes-all De Leon race, where he can finally get one over the man responsible, smarmy rival racer Dino Brewster (Dominic Cooper).

As you may have guessed, storytelling isn't one of *Need for Speed*'s strengths. Nor does it need to be in a film about racing supercars. Sadly, far too much of the film's ridiculous 130-minute running time is wasted on the trite plot and limp characterisation. Thankfully, the car racing and stunts (all done practically, eschewing CGI) are utterly breathtaking and provide the sort of thrills and excitement so sorely lacking when it's just the actors on screen. *Picture:* This release includes two hi-def platters – one containing the 'flat' 2D AVC 2.40:11080p version of the film (and the extra features), the other reserved for the MVC-encoded 3D presentation. Both look every bit as sleek and sexy as the movie's over-engineered automobiles.

By utilising a combination of Arri Alexa and Canon C500 digital cameras, depending on the filming conditions, director of photography Shane Hurlbut has conjured up a pin-sharp look. No matter what's happening in shot, the image is always impeccably clean, textured and bursting with some astonishingly vibrant colours.





HCC VERDICT

Need for Speed 3D

→ EntertainmentOne

→ Region B BD → £25 Approx

WE SAY: This racer serves up serious

AV thrills with its razor-sharp 1080p

visuals and aggressive 5.1 sonics



And while the film was shot in 2D, director Scott Waugh worked closely with Hurlbut to ensure that everything was done with 3D in mind. The result is one of the most impressive stereoscopic conversions we've seen to date, delivering an equally convincing volumetric experience.

Audio: Need for Speed's DTS-HD Master Audio 5.1 soundtrack delivers on its hi-octane promise. Engines roar and throb with powerful yet controlled bass; tyres squeal against asphalt as the cars swing wildly through traffic; oncoming vehicles whistle past you or both sides; a crashing Koenigsegg Agera flips over your head from the front to the rear of the soundstage.

Away from all of the vehicular mayhem the multichannel soundmix also impresses with the expansive scale it gives the film's varied locations. Music and dialogue are also flawlessly rendered – although given the quality of the script, you may wish that the latter was obscured by the growl of a V8 twin-turbo engine.

Extras: Director Scott Waugh is joined by leading man Aaron Paul for a very amiable and informative commentary track that is repeated across both of the hi-def platters.

Further production info can be found in the trio of featurettes about filming the driving sequences (10 minutes), the famous Gilbert family of stuntmen (12 minutes) and a production diary for the shoot (11 minutes). Finishing things off are four deleted scenes, an ad-lib outtakes reel and a *Need for Speed: Rivals* videogame trailer.

The Monuments Men

20th Century Fox → Region A/B BD £25 Approx



There's undoubtedly a great story to be told about the unlikely platoon put together to track down artistic

masterpieces stolen by the Nazis during World War II. However, The Monuments Men isn't it. George Clooney's film is crippled by an inability to settle on a tone, swinging for pathos and comedy, only to end up in a frustrating no-man's-land between the two. Still, it's a gorgeous flick and this Blu-ray's 2.40:11080p encode certainly makes the most of the production's attention to period detail. A lively DTS-HD MA 5.1 mix proves an ideal match for the disc's pristine visuals.



Chinese Zodiac

Universal Pictures → All-region BD £20 Approx



It's been a long time since we last got excited about a new Jackie Chan film and this convoluted action-

comedy blockbuster does nothing to remedy the situation. Even the stunts fail to generate much excitement, with only two climactic fight scenes reminding fans of Chan's glory days. At least we can't complain about the Blu-ray's beautifully resolved AVC 2.40:11080p encode and ferocious DTS-HD MA 5.1 Mandarin soundtrack (although the disc defaults to a lossy DTS English dub). Rounding out Universal's impressive hi-def platter is an excellent 57-minute Making of... doc.



Last Vegas

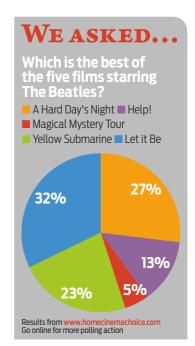
Universal Pictures → All-region BD £25 Approx



Does the thought of watching Morgan Freeman, Robert De Niro, Michael Douglas and Kevin Kline ogling

young bikini-clad ladies sound like fun to you? If so, then this comedy about four 60-something friends reuniting in Vegas should be right up your street. However, should you prefer comedies to be rather less creepy and actually make you laugh. then not even the richly-coloured 2.40:1 1080p visuals, balanced DTS-HD MA 5.1 audio and surprisingly comprehensive array of extras offered up by this Blu-ray platter will sway you into picking up this dismal effort.







Gunning for high-definition glory

War! What is it good for? Absolutely breathtaking picture and audio, of course...

→ LONE SURVIVOR

Based on real events involving an ill-fated Navy Seal mission to kill a Taliban commander in Afghanistan, Peter Berg's latest film presumably set out to tell a powerful and moving story about sacrifice and loyalty to your fellow soldiers. Unfortunately, between its mix of heavy-handed, flag-waving jingoism and action movie dynamics, it ends up feeling like nothing more than another testosteronefuelled Hollywood actioner.

For all of its posturing about being a serious attempt at recreating real events, Lone Survivor's true selling point is the fact that the entire second act is basically one (admittedly spectacular) extended gunfight, pitting the four fleeing Navy Seals against hundreds of Taliban soldiers. This is no bad thing per se, but for all of the effort put in to establishing the four protagonists as 'real' human beings (with home lives and feelings), when the bullets start flying they're capable of taking just as much punishment as the likes of Stallone and Schwarzenegger did in their most outlandish roles. Realistic? Hardly. Picture: Shot using Red Epic cameras, Lone Survivor's digital photography looks magnificent on Blu-ray. The 2.40:1-framed image boasts crisp edges and sumptuous detail, offering the sort of effortless clarity that gives its resolutely 2D visuals a palpable sense of depth and texture.

Blacks are absolutely rock-solid and colour reproduction is equally striking, being just as happy handling the vibrant red splashes of blood as it is with the subtle differences in the various flesh tones. By any measure it's a cracking transfer.



Audio: The disc's DTS-HD MA 5.1 soundtrack is a match for the peerless hi-def visuals. While the dialogue is as natural as you could hope for and the ambient effects succeed in giving a sense of space that extends beyond what you can see, it truly comes in to its own when the action kicks off.

Chapters 10 to 14 subject you to some of the most effective and convincing positional effects we've ever encountered, throwing you right into the heart of the gunfight with bullets zipping perilously close to your seat. There's no shortage of bass either, be it the dull thud of a bullet ripping into a body or the explosions that regularly boom out of the mix.

Extras: This HD platter offers up a modest collection of featurettes about the making of the movie and the events that inspired it. Among the latter are short videos about the US troops who died in the operation and a piece about the 'Pashtun code of life' that helped save one Navy Seal. Worth a watch.





HCC Verdict

Lone Survivor → Universal Pictures → All-region BD → £25 Approx **WE SAY:** This rather schizophrenic action epic definitely delivers the goods when it comes to AV quality







→ THE LEGO Movie 3D

By all rights *The LEGO Movie* should be terrible. If Michael Bay can only manage to make one watchable flick based on a toy range featuring

giant transforming robots, what hope did anybody have in making a film based on a famous range of interlocking plastic bricks?

But against all the odds, *The LEGO Movie* isn't just a good film, it's a great one. The credit for this belongs almost entirely to writing and directing duo Phil Lord and Christopher Miller, who have previous form working cinematic miracles with *21 Jump Street*. As with that action-comedy, under Lord and Miller's guidance what could have been little more than an unappetising cash-grab is instead a fast and funny satire that clearly enjoys playing to genre conventions just as much as it does messing with them.

The basic plot is typical 'Hero's Journey' stuff, with ordinary LEGO minifigure Emmet Brickowski (voiced by Chris Pratt) being mistaken for the prophesied 'Special' who can stop the nefarious Lord Business (Will Ferrell) from unleashing the mysterious doomsday weapon known only as the 'Kragle'. Joining Emmet on his quest are Master Builders Wyldstyle (Elizabeth Banks), Vitruvius (Morgan Freeman) and a host of other minifigure misfits including Batman (Will Arnett), Princess Unikitty (Alison Brie), '80s spaceman Benny (Charlie Day) and cyborg pirate Metal Beard (Nick Offerman).

What follows is a riotous blast of pure, unbridled imagination played out as a battle between order and chaos. It's also far more subversive than any glossy studio flick usually is – but in a way it's only fitting that a toy that positively encourages you to disobey the instructions and build whatever you want should have a movie that approaches the perils of consumer culture and corporate homogeny in exactly the same way.

Initially conceived in a boardroom as an extended commercial for a toy line, with *The LEGO Movie* Phil Lord and Christopher Miller have put together an ultra-smart celebration of the power of imagination. The is one animated gem that was definitely built to last.

Picture: This release includes two discs, one for the 2D presentation, the other housing the 3D version, and either way you're in for a treat.

The MVC 2.40:1 1080p stereoscopic encode is a stunner, giving a palpable sense of depth and space to every environment and the CG.

to every environment and the CG-rendered LEGO characters and blocks used to build them.
Thankfully, the film doesn't overload on negative-parallax effects either, being more concerned with drawing you into its world rather than poking you in the eye.

Indeed, it's the smaller things that really impress, such as the textures evident in the tiny chips and scratches that run across the plastic characters.







The film is packed with fun cameos from some very recognisable LEGO minifigures, past and present (left)

The 'flat' AVC-encoded 2.40:11080p transfer is equally beautiful. Colours are brightly saturated, blacks look infinitely deep and detailing is about as good as it gets in a Full HD transfer.

Cementing these two BD transfers as top-tier is a complete absence of technical issues such as artefacting, banding and edge enhancement. *Audio:* The LEGO Movie's barnstorming DTS-HD Master Audio 5.1 soundtrack provides a reference-quality experience, combining accurate placement and movement around the whole soundstage with well-articulated and intelligible dialogue.

Bass response is big and booming, giving scenes of explosive destruction plenty of power and weight. It's also a treat to find a film that makes such playful and aggressive use of the surround channels, with the sound design going all out to match the onscreen chaos.

Extras: A commentary track finds co-writers/
directors Phil Lord and Chris Miller joined by voice
actors Chris Pratt, Alison Brie, Will Arnett and
Charlie Day (plus, eventually, Elizabeth Banks via
telephone). They seem to be having a fun time
watching the film, cracking wise and pointing
out hidden gags. It's an amusing listen, but
doesn't reveal much about the nuts and
bolts of the film's production or its origins.
The remainder of the extra features are
short spoof videos, fan films and
kid-friendly LEGO tutorials. So,
just like the movie itself, none
of the Blu-ray's extras take
themselves too seriously.

Something of a

missed opportunity.



HCC VERDICT

The LEGO Movie 3D → Warner Bros. Home Entertainment

→ All-region BD → £28 Approx **WE SAY:** Reference-quality picture and sound ensure that this 3D Blu-ray is among our new favourite toys



ARCADE ACTION

Bigscreen home entertainment isn't just about movies anymore. Check out these two videogames vying for time on your home cinema system...

Watch_Dogs

Ubisoft → Xbox 360/Xbox One/PS3/PS4/PC → £50 Approx



Ever since it first broke cover in 2012, Ubisoft's ambitious open-world title has been touted as the game that would define the new generation of consoles, the game that would prove just what the PS4 and Xbox One were really capable of.

WATCH DOGS

Unsurprisingly, Watch_Dogs doesn't really live up to the pre-release fervour that surrounded it. But that's not to say it's a failure. As it happens the game is an enjoyable mix of Grand Theft Auto and Ubisoft's own Assassin's Creed, letting you run around Chicago as hacker-cum-vigilante Aiden Pearce as he attempts to track down

the people responsible for the death of his niece.

As good as the driving and combat models are, what really lifts Watch_Dogs out of the glut of GTA clones is Aiden's smartphone. As well as allowing you to hack into camera and computer systems to solve puzzles, it also lets you to turn the environment itself into your ally, opening bridges and changing traffic lights to thwart pursuing cars, or taking out enemy soldiers with exploding electrical junction boxes. It isn't the best-looking game around (even the next-gen console versions suffer from obvious 'pop-up') but Watch_Dogs is a lot of fun and introduces some enjoyable gameplay wrinkles to the format. Just don't go expecting a new videogame benchmark.



Wolfenstein: The New Order

Bethesda → Xbox 360/Xbox One/PS3/PS4/PC → £50 Approx



One of the most revered franchises in videogame history returns for another slice of Nazi-fighting fun, five years after the previous offering. Set in an alternate universe where the Nazis won World War II and now seek complete global domination, *Wolfenstein:* The New Order reunites joypad-wielders with series hero B.J.

Blazkowicz, freshly roused (in the 1960s) from a coma in a Polish asylum. Soon, you're hot-footing it across Europe, trying to help the Resistance halt Nazi expansion.

The strengths here are the well-paced chapter-based plot that puts many

other first-person shooters to shame by actually being interesting, and inevitably, the gunplay. *Wolfenstein: TNO* is insatiably bloodthirsty and all the better for it, but there's more to its mechanics than just tapping R1, with a level of stealth and tactics on offer to give you the upper-hand in the fire-fights. Some levels can feel a bit repetitive, though.

Sonically, this sounds good on a cinema setup, with considerable weight given to the artillery, although dialogue is sometimes hard to discern. And graphically it's quite pretty, though not a reference-grade next-gen experience (we played the PS4 version). Perhaps its main problem is the strength of the first-person-shooter competition — other titles trade narrative flair for out-and-out slickness.



Under the Skin

StudioCanal → Region B BD £23 Approx



Sexy Beast director Jonathan Glazer's sci-fi film is the kind of head-scratcher that really benefits from repeat viewings, making this Blu-ray release an essential purchase for those

not alienated by the film's aggressively arty style and Scarlett Johansson's necessarily detached central performance. On top of the stunningly beautiful AVC 1.85:1 1080p encode and haunting DTS-HD MA 5.1 soundtrack, this desirable platter also includes ten informative behind-the-scenes interviews.



In the Flesh: Series One and Two

BBC Worldwide → Region B BD £30 Approx



The worst part about BBC Three being axed as an on-air channel is wondering what will happen to Dominic Mitchell's superb zombie series. More inventive and unpredictable than the far

more lavish *Walking Dead*, it's been one of the highlights of BBC Three's output and deserves a slot on one of the surviving on-air channels. Still, whatever happens, fans will always have this three-disc set featuring the first two series – although aside from first-rate 1080i transfers and solid DTS-HD MA 2.0 audio, it's a disappointingly barebones affair.



House of Cards: The Complete Second Season

Sony Pictures → Region A/B BD £40 Approx



While it lacks some of the admirable tautness of the initial season, this second outing for Netflix's political thriller revels in its protagonist's Machiavellian machinations as

Francis Underwood (Kevin Spacey) is sworn in as Vice President and continues to manipulate all around him in his quest for power. Unlike its predecessor, this new four-disc set includes a smattering of extras alongside its striking AVC-encoded 2.00:1 Full HD imagery and nuanced DTS-HD MA 5.1 sonics.





Director Gareth Evans raises the bar for martial arts mayhem with this energetic action sequel

→ THE RAID 2

How do you follow up the most talked-about action flick of the past decade? For Welsh writer-director Gareth Evans the answer was simple – you dust off an old script you'd written several years ago about an undercover cop and rework it as a continuation in the adventures of rookie officer Rama (Iko Uwais).

The result is a crime film that trades the laser-focused thrills of its predecessor for a more sprawling tale of deep-cover police and rival gangs. It runs to 150 minutes, but the occasional lack of urgency is counterbalanced by the action sequences. Awesomely inventive and astonishingly violent, they really are bigger and better than anything the original film had on offer, and confirm *The Raid 2* as one of those rare sequels that actually exceeds expectations.

Picture: This film punches and kicks its way onto Blu-ray with a striking AVC-encoded 2.40:11080p transfer. The use of ever-popular Red digital cameras results in a very uniform image, bursting with intricate details and swathes of rich colours.

That's not to say that the imagery is flawless. Contrast is a little flat in a couple of scenes, resulting in the type of faded blacks that often turn up in digital photography. While this only happens a few times and isn't a major issue, it does prevent the disc's Full HD encode from achieving perfection — as does the use of dinky GoPro Hero 3 cameras during a couple of the film's more frantic action moments.



Julie Estelle's 'Hammer Girl' definitely lives up to her rather snappy moniker



HCC VERDICT

The Raid 2

→ EntertainmentOne
→ Region B BD → £20 Approx

WE SAY: Bigger and more brutal than
its predecessor, this is one action
sequel that really delivers the goods



Audio: The Blu-ray's Indonesian DTS-HD MA 5.1 soundtrack excels with its front soundstage presentation, with the martial arts scenes demonstrating just how wide, precise and impactful the track's L/C/R components are.

The downside to this is that the power and directionality inherent in the front of the mix makes the rather modest use of the rear speakers all the more obvious. There are a handful of moments that really kick the surround effects up a notch (Chapter 4's prison riot and Chapter 15's car chase are the best examples), but for the most part they favour far more discreet, atmospheric effects.

The disc also includes a DTS-HD MA 5.1-rendered English dub, which is just as bad as you'd expect. *Extras:* EntertainmentOne has gathered together a respectable set of bonus features. Director Gareth Evans provides a detailed solo commentary that covers all of the expected production details and offers up plenty of anecdotes. Supporting this are a trio of *Making of...* featurettes focusing on different aspects of the production – *The Next Chapter:* Shooting a Sequel (11 minutes), Ready for a Fight: On Location (13 minutes) and Violent Ballet: Behind the Choreography (19 minutes).

There's also a single 'Gang War' deleted scene (providing another five minutes of trigger-happy ultra-violence), plus a CineFamily Q&A with Gareth Edwards, Iko Uwais and Joe Trapanese (44 minutes) and a UK Exclusive: Fan Event Q&A (eight minutes) again featuring Evans and Uwais, but this time joined by actor/fight choreographer Yayan Ruhain.



Bringing The Beatles to Blu-ray

A brand-new 4K restoration adds plenty of sparkle to Richard Lester's iconic musical movie





HCC VERDICT

A Hard Day's Night: 50th Anniversary Restoration → Second Sight → Region B BD → £25 Approx WE SAY: A sensational hi-def package for this fabulous film. Unmissable!



→ A HARD DAY'S NIGHT

Made at the height of Beatlemania, Richard Lester's comedic pseudo-documentary follows the Fab Four as they head to London to record a performance. Along for the ride is Paul's grandfather John (Wilfrid Brambell), whose antics turn the members of the band against one another and throw the entire production into chaos.

One of the most influential musical movies ever made, A Hard Day's Night is an anarchic blast of air that revitalised the genre with a kinetic, quick-cutting style that lends it all an improvisational feel. And at the heart of it all are John, Paul, George and Ringo, effortlessly transferring their 'cheeky-chap' personas to the big screen and performing a medley of chart-topping hits. Simply brilliant.

Picture: This Blu-ray derives from a brand-new 4K restoration and looks every bit as spectacular as you would expect. Contrast and clarity in the black-and-white 1.75:1 1080p image are faultless, and dirt and print damage are noticeable by their absence.

Fine detailing also impresses, particularly in close-ups, and the restoration team has resisted any urge to push things further with egregious digital sharpening. Add to this the refined nature of the native film grain and you're left with a pleasingly organic hi-def presentation.

Audio: The disc gives Beatles fans the choice of three audio options. There's a restored LPCM version of the original mono mix for purists, an LPCM stereo presentation for those who want to open the music

sequences up a little without losing the feel of the original mix, and a new DTS-HD MA 5.1 version mixed by Apple Records. Whichever of the three takes your fancy, you're sure to be delighted with the results.

The two LPCM tracks are immaculate, with excellent balance throughout and surprisingly potent dynamics during the musical numbers. The new 5.1 track is altogether richer and more expansive, with significantly greater depth and nuance in both the dialogue and foot-tapping tunes.

Extras: Cementing it's position as the definitive UK release of this classic film, Second Sight's Blu-ray is packed with bonus goodies.

In Their Own Voices (18 minutes) features contemporaneous audio interviews with The Beatles about the flick, which play over a gallery of behind-the-scenes photography. You Can't Do That! The Making of A Hard Day's Night (62 minutes) is a lengthy retrospective 1995 documentary narrated by Phil Collins. The 2002 documentary Things They Said Today (36 minutes) continues in a similar vein, but focuses on the film's production history and success.

Picturewise (27 minutes) looks at Richard Lester's directorial traits. Anatomy of a Style (17 minutes) explores the innovative editing of the film's music sequences. The Beatles: The Road to A Hard Day's Night (28 minutes) discusses the band itself and its impact on the music business.

Rounding things out are an enjoyable audio commentary featuring input from 14 members of the film's crew and supporting cast, plus a 50th Anniversary trailer. Goo goo goo joob!

The Driver

StudioCanal → Region B BD £23 Approx



The inspiration for countless other films (and more than a few videogames), this sleek 1978 crime thriller

follows the game of cat and mouse between Ryan O'Neal's getaway driver and Bruce Dern's obsessed cop. Written and directed by Walter Hill, *The Driver* is pared back to the bone (none of the characters are given names, only titles), keeping the focus squarely on action rather than words. In addition to an attractively rendered 1.85:11080p visuals and authentic LPCM 2.0 mono audio, the disc also includes an alternate opening, 13 teasers/TV spots and a trailer.



Frau Im Mond

Eureka! Masters of Cinema → Region B BD/R2 DVD → £25 Approx



While Fritz Lang's 1929 silent epic (aka Woman in the Moon) can test your patience with its 170-minute running

time, it's a fascinating early attempt at looking to the future and portraying space exploration in a 'realistic' and serious manner. While not without some issues (a handful of shots suffer quite noticeably from large scratches and other damage), the restoration featured on this hi-def platter is generally excellent, with the AVC 1.33:11080p encode revealing a wealth of intricate detail. A 15-minute German featurette about the film and 36-page booklet are also included.



Swallows & Amazons: 40th Anniversary Ed.

StudioCanal → Region B BD £23 Approx



This screen adaptation of Arthur Ransome's classic book may struggle to live up to its source material (and

suffers from a couple of dreadful juvenile performances), but it's still an endearing paean to the children's imaginations. This 40th Anniversary Edition Blu-ray serves up a respectable 1.66:1 1080p presentation of the rather ordinary visuals, joined by a satisfyingly clean LPCM mono mix. Best of the extras is an eight minute reel of behind-the-scenes home movie footage shot by Sophie Neville's father, with new commentary from the actress.



Harold and Maude

Eureka! Masters of Cinema Region B BD → £25 Approx



The blackest of black comedies, Hal Ashby's 1971 flop tells the story of a death-obsessed 20-year-old rich kid

(Bud Cort) who falls in love with an 80-year-old woman (Ruth Gordon) determined to live her life to the full. This most unlikely of rom-coms arrives on Blu-ray with an appealing AVC 1.85:1 encode that does a fine job in capturing that slightly soft aesthetic familiar to so many films of this vintage. Restored LPCM audio is provided in mono and stereo, both of which do full justice to the Cat Stevensinfused soundtrack. A commentary is the highlight of the disc's limited extras.



Crank up the Jacques-in-the-box

StudioCanal's celebratory boxset is a must-own for fans of the legendary French funnyman

→ JACQUES TATI: ESSENTIAL

Between 1949 and 1974 Jacques Tati wrote, directed and starred in six feature films of such astonishing wit, invention and intelligence that he is often hailed as the most important comedy filmmaker of the sound era. The reasons for this are made abundantly clear by this set, which runs the gamut from Tati's celebrated Hulot tetralogy (*Les Vacances de M. Hulot, Mon Oncle, PlayTime* and *Trafic*) to his slapstick debut *Jour de fête* and the madcap circus of *Parade*.

Picture: The hi-def incarnations of Tati's six flicks (see 'Extras' below) have been meticulously restored

and look absolutely stunning. Pick of the transfers is undoubtedly *PlayTime*, which is based on a new 4K restoration that easily bests Criterion's US release.

Perhaps the biggest beneficiary, though, is *Parade*. Despite being predominantly shot on video, the 16mm and 35mm inserts now look immaculate and easily justify the 1080p upgrade.

Audio: All of the HD versions of the films utilise restored DTS-HD MA 2.0 mono soundtracks. Quality is generally very good across the board, although the clarity of dialogue becomes less of a concern in some of the latter films as Tati frequently plays it down in the mix, using it as just another aural effect to give the tracks extra texture. So: don't be worried if you can't always make out exactly what people are saying (which also explains why not everything is subtitled in English).



Extras: In-depth critical analysis isn't in short supply in this boxset, with each of the six feature films coming accompanied by a lengthy video essay.

There are also multiple versions of three of the films (three for *Jour de fête* and two each for *Les Vacances de M. Hulot* and *Mon Oncle*). Unfortunately, not all of

these are presented in hi-def, presumably due to a lack of quality source materials. However, as these are more often than not curios, rather than the definitive versions of the films, it's not a problem.

Also included is a seventh Blu-ray containing remastered versions of seven short films Tati made between 1934 and 1978. Accompanying this is a 31-minute reel of videos produced for a Tati exhibition at the Cinématèque Française in 2009.





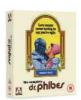
HCC VERDICT

Jacques Tati: Essential

→ StudioCanal → Region B BD

WE SAY: This impressive boxset more than lives up to its 'Essential' billing. A genuine must-own for film fans





The doctor will see you now...

Vincent Price fans will clamour for this Phibe-ulous limited edition BD release

→ THE COMPLETE DR. PHIBES

Like some kind of camp 1970s precursor to the *Saw* franchise, *The Abominable Dr. Phibes* stars Vincent Price as the titular Phantom of the Opera-like ghoul out for revenge on the doctors he blames for the death of his wife. To this end he concocts a series of ingenious and spectacular murders patterned on the ten plagues of Egypt from the Old Testament.

Sequel *Dr. Phibes Rises Again* finds Price's twisted genius rising from the grave and heading to Egypt to track down the location of the 'River of Life', which holds the secret of restoring his late wife.

Weird and witty, these two cult classics make an interesting antidote to the malicious, cruel shockers

DR. PHIBES

Hollywood seems to favour today. *Picture:* Both of Arrow's AVC 1.85:1 1080p encodes look surprisingly strong, exhibiting plenty of pixel detail and vibrant colours. And while the opening minutes of the sequel still look rather ropey, the huge improvement immediately

afterwards shows that this is an issue with the original elements rather than a lack of care in the restoration itself. Overall, these HD presentations are solid, fan-pleasing efforts.

Audio: Both films arrive on Blu-ray with LPCM 2.0 dual-mono presentations of their original soundtracks. As you might expect, dynamic range is rather limited in both, but otherwise they're about as good as you could hope for in their handling of the dialogue and score (particularly Basil Kirchin's memorable compositions for the first movie).



Extras: The Abominable Dr. Phibes is graced with a commentary from director Robert Fuest and film historian Marcus Hearn; a second commentary by writer William

Goldstein and his son Damon; an interview with comedy troupe 'The League of Gentlemen' about their love of the films; and the trailer.

Meanwhile, *Dr. Phibes Rises Again* offers up a commentary by film critic Tim Lucas, an interview with Victoria Price, an interview with Vincent Price biographer David Del Valle and the trailer.

Limited to just 3,000 copies, the double-pack also includes a lavish 100-page book — although the layout of the photos used to illustrate this otherwise excellent volume is a bit thoughtless.

HCC VERDICT

The Complete Dr. Phibes

→ Arrow Video → Region B BD

→ £35 Approx

WE SAY: A suitably fabulous limited edition Blu-ray set for one of Vincent Price's most memorable creations



Porky's Arrow Video → Region B BD £25 Approx



Bob Clark's raunchy comedy hasn't stood the test of time that well (it all feels a bit tame 32 years on), but its impact on Hollywood can't be argued with, and this hi-def package

certainly does its best to present *Porky's* in the best light possible, with the AVC 1.85:1 1080p encode and LPCM mono soundtrack proving to be an accurate representation of the film's low-budget origins. Extras take the form of a director's commentary, a 15-minute interview with Clark, an 11-minute celebration of the film from infamous web icon 'Mr Skin', trailers for all three *Porky's* films and a 20-page booklet.

Bloody Birthday

88 Films → Region B BD £20 Approx



This unusual addition to the early '80s slasher cycle sees a trio of terrible 10-year-olds going on a murder spree

(something to do with being born during a total eclipse). While hardly on a par with *The Bad Seed* or *Who Can Kill a Child*? it's a fun addition to the 'evil child' sub-genre and this Blu-ray release makes a re-visit all the more appealing. While the LPCM dual-mono soundtrack suffers from some background crackling in a few quieter scenes, the AVC 1.78:11080p visuals look much more robust than we expected. A UK-exclusive chat-track heads up a solid batch of bonus features.



Devil's Due

20th Century Fox → All-region BD £25 Approx



With their 10/31/98 segment being the highlight of the horror anthology V/H/S, it came as no surprise

that Radio Silence would be offered the chance to make a full-length film. What is surprising is that the resulting flick would turn out to be a tired 'found footage' retread of *Rosemary's Baby* that fails to reproduce the flair found in their shorter outings. While the Blu-ray's DTS-HD MA 5.1 sonics deliver plenty of thrills, the 1080p video is rather less exciting due to the film's intentionally lo-fi aesthetics. Extras are not only plentiful, but are more interesting than the film itself.



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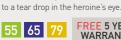






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TOP 10 TELEVISIONS

All prices are approx and may have changed



Sony KD-65X9005B→£3,600

A groundbreaking set from Sony. The 'Wedge' cabinet design afford rooms for a best-in-class audio performance from the side-mounted speakers, while imagery is hard to fault, with crisp 4K images and impressive motion. HCC #236



Samsung UE65HU8500→£4,000 ★★★★★

This second-gen 4K flagship is a first-rate (curved) flatsceen with colour-rich, lethally-sharp images. The external connections box provides welcome future proofing. HCC #234



Panasonic TX-P60ZT65→£3,800 ★★★★

This plasma lives up to its 'Beyond Reference' billing, with the best 1080p picture in town – imagery is effortlessly cinematic. But at this price, you might want 4K... HCC #223



Samsung PS64F8500→£3,000 ★★★★★

A new panel design has given Samsung's plasma tech a much needed injection of brightness and contrast. The result is a premium bigscreen display that constantly wows. HCC #221



Sony KDL-50W829→£900 ★★★★★

Impressively affordable, Sony's 50in LED stands out courtesy of brilliant motion handling and sharp Full HD imagery. The new 2014 user interface offers a few Smart tricks, too. HCC #233



Samsung UE40H6400→£650 ★★★★

This mid-market TV will probably sell like hotcakes. It ignores 4K in favour of Full HD, and combines a pleasing AV performance with plenty of useful Smart features. HCC #236



Samsung UE46H7000→£1,300 ★★★★★

The Korean brand's top Full HD 'flat' screen for 2014, this is perhaps expensive, considering it misses out on some higher-end processing features. But it's still a solid performer. HCC #235



Finlux 50F8075-T→£600 ★★★★

The best screen we've seen yet from the direct-retail corp, this 50-incher matches its affordability with a great user interface and solid, but not awe-inspiring, HD visuals. HCC #234



Toshiba 84L9363DB → £7,000 ★★★★

An 84in 4K screen for only £7,000 – this Tosh is certainly a bargain. Native 4K impresses in terms of clarity and colour punch, but motion and upscaling can be bettered. HCC #231



10

Sony KDL-55W955→£1,600 ★★★★

Top of the Japanese giant's 1080p line up, the W955 offers excellent motion handling and great sonics, but is held back by backlight uniformity errors and sluggish operation. HCC #234

TECH INFO: TELEVISIONS



Plasma or LCD?: The TV market is increasingly dominated by LED-lit LCD screens that are much, much thinner than traditional cold cathode fluorescent lamp (CCFL) screens. For 42in and above, plasma display panels (PDPs) come into play, although LED screens up to 90ins are also hitting the high street – and 85in 4K panels are also on offer. Plasma screens generally offer superior black levels, better viewing angles and less 3D crosstalk, but less brightness and more energy consumption. There's also a limited choice – only Samsung, LG and Panasonic are selling plasma TVs in the UK, and the latter will soon stop.



Active or Passive: At the beginning of the 3D revolution, most TVs featured the Active system that uses relatively expensive, powered 3D specs to deliver Full HD images to each eye. Passive 3D TVs, which are increasingly common and now sold by LG, Philips, Toshiba, Sony, and Panasonic, have a filter over the screen and use non-powered specs with polarising filters. The glasses are cheap as chips, but the resolution of Full HD 3D is halved to 540 lines horizontally (but remains at 1,920 vertically). Glasses-free 3D is in its infancy, with just Toshiba's ZL2 on sale.

Top 5 BLU-RAY MOVIES



Fast & Furious 6: Extended Action Packed Edition

This is pure escapism on a cracking BD disc – the car acrobatics and rapid-fire fist-fights are delivered with pin-sharp 2.40:1 visuals and a precision-steered soundmix.

★★★★⋾



Pacific Rim 3D

While the lack of a 7.1 mix is disappointing, Guillermo del Toro's monster mash still delivers demo-worthy hi-def visuals in both its 2D and 3D incarnations. It also comes loaded with fantastic extras.



Man of Steel 3D

Looking for a lossless soundtrack that is guaranteed to push your audio setup to its absolute limits? Then do yourself (and your home cinema) a favour and pick up Superman's latest cinematic outing.



Rush

This Formula One biopic is simply magnificent, both in terms of production values/performances and its thrilling DTS-HD 5.1 mix. The BD hosts a nice selection of extras, too – an essential disc for petrolheads.





Gravity 3D

Alfonso Cuarón's sci-fi flick rewrites the rulebook on movie sound design, and stakes a claim to the 3D crown. A disc you'll return to again and again when you want to test your system – nice extras. too.



TOP 10 BLU-RAY PLAYERS

All prices are approx and



Oppo BDP-103EU→£500 ★★★★

Oppo's first deck for two years was worth waiting for. The universal BDP-103EU features a class-leading build and all manner of bonus goodies, including twin HDMI inputs. AV performance is faultless, and the onscreen menus are superb. A new model, the £600 BDP-103D, adds Darbee Visual Presence processing for you to play with. HCC #215/#228



Oppo BDP-105D→£1,000 ★★★★

This heavyweight deck builds upon the premium picture performance of the BDP-103D with a wealth of audiophile upgrades – if you're serious about music, check it out. *HCC* #234



Marantz UD7007→£1,000 ★★★★

Marantz's top-line player doesn't bother itself with feature fads like 4K upscaling, preferring to offer faultless BD playback, music streaming (including FLAC) and balanced outputs. HCC #220



Pioneer BDP-450→£230 ★★★★★

An affordable universal player, the BDP-450 ignores analogue outputs and concentrates solely on the digital age. Well-built and an assured performer. $HCC\ \#219$



Samsung BD-H6500→£130 ★★★★

Our current fave bargain BD deck — actually Samsung's 'flagship' model — is packed with Smart features, including support for the brand's multiroom system, and super-quick in operation. *HCC #236*



Denon DBT-3313UD→£900 ★★★★

As a 'transport', this universal deck lacks built-in decoders and analogue outs, but partner it with one of the brand's AVRs via Denon Link HD and you'll be rewarded. HCC #217



LG BP645→£100 ★★★★

An affordable, likeable offering from LG. The BP645 claims Spotify compatibility and Wi-Fi-enabled headphone listening among its bonus features. Slim, but lightweight design. *HCC #236*



Sony BDP-S5200 → £100 ★★★★

Again using a compact bedroom-friendly design, Sony's quirky-looking deck is a good budget option, but not as Smart or as smooth to use as some of its price-point rivals. HCC #236



Panasonic DMP-BDT330→£200 ★★★★

New for 2013, this slim-line spinner is a solid choice, although the Viera Connect portal is beginning to feel a bit out-dated and the DMP-BDT500 (above) offers better features. HCC #221



Pioneer BDP-160 →£130 ★★★★

The successor to the BDP-150 adds integrated Wi-Fi, making media file playback simpler. The Smart hub is still practically empty, but SACD support softens the blow. HCC #227

TECH INFO: BLU-RAY PLAYERS

Matching your deck to your AV receiver: Blu-ray decks are designed to deliver top-notch images but Blu-ray is also about enjoying superior quality sound. When choosing a player, bear in mind the connectivity and decoding features of

your AV receiver. If you're still using an older model that doesn't offer HDMI inputs, then you'll need a Blu-ray player with multichannel analogue audio outputs to enjoy decoded hi-res surround sound formats. Similarly, older but still HDMI-equipped receivers may not be able to cope with 3D video signals, in which case you'll need a deck with dual HDMI outputs — one channelling audio to your receiver amp, the other piping video direct to your TV.

What about the PlayStation?: Sony's console still represents an easy path to hi-def heaven. For a low-budget home cinema system, the £200 PS3 Slim (160GB) makes a decent choice — especially if you like playing games (in 3D, if you fancy it). Control via a joypad is a pain, though, and the console runs more noisily than most BD spinners. The recent PS4 is a much better gaming machine, but currently doesn't offer 3D BD (or CD!) playback.



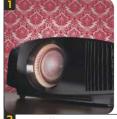
DEMO DELIGHT

Prometheus: Ridley Scott's return to the sci-fi genre is a treat for your senses, with a crystal-clear HD image and spine-tingling sonics. The 3D presentation of this outer-space horror is impressive too — it oozes depth and proves utterly immersive



Top 10 PROJECTORS

All prices are approx



Sony VPL-VW500ES → £8,800

Sony's second-gen 4K projector is around half the price of the VPL-VW1000ES (below) and comes with HDMI 2.0 chippery and Triluminos colour wizardry. Auditioning this classy PJ is a no-brainer. HCC #228



JVC X500R→£5,000 ****

Armed with a more adept third-generation of the brand's proprietary e-shift technology, the X500R continues JVC's winning ways – contrast rich, sharp and full of tweaks. HCC #232



Sony VPL-VW1000ES → £17,000 ★★★★★

Sony's flagship projector is an absolute triumph, giving film fanatics the chance to upscale their Blu-ray collection to 4K resolution. The start of a new era? We hope so! HCC #209



SIM2 Super Lumis→£37,000 ★★★★★

With a more potent lamp than its Lumis forebear, this light-cannon from SIM2 costs an arm and leg, and is only Full HD, but delivers an astonishing level of performance. HCC #227



Epson EH-TW7200→£1,900 ★★★★★

Priced to appeal to those unable to dabble in the £3,000 market. Epson's mid-ranger is a great purchase. No frame interpolation on offer, but colours, contrast and brightness impress. HCC #232



Sony VPL-HW55ES→£2,800 ★★★★★

Not one of Sony's 4K models, but this keenly priced Full HD projector delivers where it counts, with solid calibration options, simple setup and brilliant 2D visuals. No 12V trigger. HCC #230



Epson EH-TW9200W→£3,000 ★★★★★

A brilliant mid-range projector with wireless HD transmission and ISF certification, yet the noise generated when running in 'Normal' lamp mode could be a concern for some. HCC #231



Optoma HD30→£1,100 ★★★★

A step up from the HD25 (below), this claims an increased contrast ratio and again offers a pleasing bigscreen performance. UI could be better, and zoom is somewhat limited. HCC #233



Optoma HD25→£800 ★★★★

Optoma's projector provides bright, stable Full HD 3D (with the Active glasses and RF transmitter included) and great-looking 2D visuals for a pittance. A bit noisy. HCC #220



BenQ W1070 → £700 ★★★★

A brilliant bargain proposition, the BenQ W1070 packs a surprising amount of useful features, including ISF certification. You'll need to fork out extra for 3D glasses, though. HCC #220

Tech Info: Projectors



Installation: Although projectors can be temporarily placed on a cupboard, stand or shelf situated at the rear of the room (use the adjustable feet on its base to level the image so that it aligns with the screen), a much better long-term solution is to mount it on your ceiling with an appropriate bracket. Projectors can be quite heavy, though, so it's important to ensure that the bracket is attached firmly – ideally, it should be secured to a joist. Position your PJ so that an imaginary line from its lens to the opposite side of the room hits the screen exactly half-way along its width. The location of your screen should therefore dictate where your projector is. A decent tape-measure or laser pointer will help you to determine the position.

Throw distance: Throw distance specifies the distance between the projector and screen for a focused image of given size. As the vast majority of projectors are equipped with a zoom lens, minimum and maximum throw distances are often specified – say, 3.01m to 6.08m for a 100in. 16:9 image. Shorter throw distances are ideal for smaller rooms, and longer ones for larger rooms. Simple.

Throw ratio: Sometimes, a manufacturer will quote a throw ratio rather than a throw distance. This is basically the throw distance divided by the image width. To get the projected image size, divide the distance between projector and screen by the specified figure. Once again, the inclusion of a zoom lens means that upper and lower figures are usually specified.

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TOP 10 SPEAKERS

All prices are approx d may have changed



B&W 683 Theatre 5.1 →£2,750

The first step on the floorstanding ladder in B&W's speaker stable, the revamped 600 Series incorporates new tweeter and bass driver designs and offers absurd value for money. Not the prettiest cabinets, but you really won't care. HCC #234

KEF R Series 7.1→£6,500 ★★★★★

A 7.1 array mixing dipolar and direct surrounds, this authorative package takes its cues from KEF's Blade concept speaker and offers faultless, largescale home cinema sonics. HCC #217

Bowers & Wilkins MT-60D→£2,000 ★★★★

This 5.1 set sits at the upper end of the sub/sat market, but buyers are rewarded by a potent performance, with the PVID subwoofer dazzling in particular. They look lovely, too. HCC #212

Q Acoustics Q2000i→£600 ★★★★

Another superior sub/sat array from the sonic wizards at Q Acoustics, this marries some surprisingly full-bodied satellite speakers to an easy-to-accommodate 2 x 6in sub. HCC #211

Wharfedale Diamond 100 HCP→£950 ★★★★★

Yet another excellent affordable package from Wharfedale, the Diamond 100 HCP offers a sound quality beyond what you might expect from its sub-£1,000 ticket. Maturely styled. HCC #224

Kreisel Sound Quattro 7.2→£8,500 ★★★★★

Mixing two mammoth woofers with some surprisingly manageable multi-tweeter speakers (including TriFX surrounds) this US package is supremely assured. HCC #232

Artcoustic Spitfire SL 7.2 → £17,000 ★★★★

Slimmed-down cabinets now even easier to install on-wall or behind a screen, with a multi-driver design ensuring they're easy to drive to high SPLs. Ideal for dedicated rooms. HCC #233

Tannoy Precision Series 5.1 →£4,450 ★★★★

These speakers' classic look belies the brand's hi-fi heritage, but this multichannel setup works wonders with movies, too – a rich, large and dynamic sound is on offer. HCC #226

Monitor Audio Radius R90HT1→£1,500 ★★★★★

The long-loved Radius speakers have been revamped with new drivers and rear ports, and this 5.1 set provides a clear, detailed sound with plenty of heft. Looks good in white, too. HCC #230

Roth OLi RA 5.1→£850 ★★★★★

A floorstanding array with neat design and reassuring build, this value-for-money pack delivers an impressive slice of scale to go with its full-range prowess. HCC #233

TECH INFO: SPEAKERS



Centre speaker: Handles most of the dialogue and onscreen effects. Should be positioned above or below the screen as close to it as possible. Of course, if you're using a projector screen, it should ideally be placed behind it.

Front speakers: Left and right speakers should be positioned either side of the screen, in line with the centre. Turn the speakers in slightly to face the listener if there isn't an even movement of sound across the front of the room.

Subwoofer: Can be positioned wherever it sounds best or can be tucked out of sight due to the non-directional nature of low-frequency signals. Be aware that close positioning in corners or next to walls can create a boomy effect.

Surrounds: Position alongside the listener, pointing in or slightly behind the ears for a good surround effect. The back wall is not a good position for surrounds – it is, in fact, where you should locate the sixth and seventh speakers (rears) in a traditional 7.1 arrav.

DEMO DELIGHT

a cinematic showcase for the powers of Dolby Atmos – but even the BD's regular DTS-HD mix is something special. The panning effects all around the soundstage plus deep LFE and crisp Foley effects. The opening scene is a great speaker show-off.

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TOP 10 AV RECEIVERS/AV PROCESSORS

All prices are approx and may have changed



Sony STR-DA5800ES → £2,200

Sony's follow up to the STR-DA5700ES continues to pack handy features (built-in Ethernet switching, a unique video-on-demand platform), ups the channels to 9.2, and brings a suite of great post-processing modes. HCC #223



Anthem MRX-510 → £1,700 ★★★★★

The Canadian brand returns in style with an AVR that ignores streaming/networking features but boasts supreme room EQ and eats movie soundtracks for breakfast. HCC #232



Arcam AVR750→£4,000 ★★★★★

If all you want from an AV receiver is vast power and effortless performance, this high-end 7.1-channel beast is tailored to you. Little bonus features beyond audio networking. HCC #225



Krell Foundation→£6,500 ★★★★

One of the US marque's more affordable offerings, the Foundation is a seven-channel processor that delivers an insightful, smooth and epic sound. And it looks fab. HCC #224



Yamaha CX-A5000 →£2,500 ★★★★

Part of Yamaha's new high-end separates line (you can match it with the MX-A5000 amp), this 11-channel processor sounds clean, precise and offers a dizzying range of features. HCC #228



Marantz AV8801→£2.500 ★★★★

The brand's high-end 11-channel processor offers balanced outputs and heavyweight engineering. Partner it with the MM8807 power amp for a supreme performance. HCC #220



Pioneer VSX-924→£500 ★★★★

Pioneer's newest £500 model brings Bluetooth and Wi-Fi, an even better control app, HDMI 2.0 specification and under-the-hood tweaks. A great-value, great performer. *HCC* #236



Onkyo TX-NR929→£1,000 ★★★★★

You get a lot for your cash with this 9.2-channel model — built-in Bluetooth and Wi-Fi join THX Select2 certification and excellent connectivity. Creates a large, full-bodied soundstage. HCC #231



Marantz NR1604→£550 ★★★★★

The third generation of Marantz's slim-line AVR continues its living room-friendly work — easy to operate, fun-sounding, FLAC/Airplay-capable and boasting a great form factor. HCC #233



Yamaha RX-V675→£500 ★★★★

The low/mid-range RX-V675 digs out all the sonic details of your Blu-ray platters and places them across the soundstage. A great-sounding AVR at a good price. Primitive UI. *HCC* #225

TECH INFO: AV RECEIVERS



Tackling new heights: You may find your AV receiver offering Dolby Pro-Logic IIz, Audyssey DSX or DTS Neo: X postprocessing - possibly all three. All of these can deliver two further Front Height channels, with the aim of adding weight and control to the front soundstage, particularly in terms of lifting the centre channel and adding scale to vertical surround effects – rainfall for example. The catch is that you will need to add two new physical speakers, mounted near your ceiling above the regular left and right channel cabinets, and make use of two of the receiver's channels of amplification, which could mean forgoing a second stereo zone or rear surrounds speakers. Note that the Audyssey and DTS modes also cater for Front Wide speakers (pictured above), but this idea seems to be gaining less traction within the industry.

How much power?: Many of the mass-market AV receiver manufacturers are involved in a specifications race to see who can say their model is the most powerful, which can be confusing for consumers. For instance, both Krell's £7,000 S-1500 seven-channel power amp and Yamaha's £500 RX-V675 both claim 7 x 150W – the important part is that Krell's figure is into an eight-ohm load with all channels driven, and that Yamaha's is with one channel into a four-ohm load, which is hardly a real-world situation. The best advice is ignore the numbers game and get a demo of your desired AVR with the same, or similar, speakers that you intend to partner it with.

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Top 10 SUBWOOFERS

All prices are approx & may have changed



Bowers & Wilkins DB1 → £3,250

Featuring a bipolar arrangement of 12in drivers powered by 1,000W of amplification, B&W's stylish flagship sub is a faultless performer, offering both musicality and sheer muscle. Fit to partner the finest of speakers. HCC #197



SVS SB-2000→£650 ★★★★

With a new 12in driver and revamped 500W Sledge DSP amplifier, this mid-sized woofer offers immense value for money and imbibes BDs with potent LFE. Easily recommended. HCC #233



JL Audio Fathom F212→£5,900 ★★★★★

The US brand arrives in the UK in style – this 2 x 12in, 3,000W brute not only looks gorgeous, it's capable of a mindblowing performance. Got a big room? Get one of these! HCC #214



Tannoy TS2.12→£550 ★★★★

The TS2.12 is easily Tannoy's best woofer yet — using a 12in driver (opposite a passive 12in cone) and 500W amp to deliver a rich, bass performance. Affordable and good-looking, too. HCC #208



REL S-5→£1,600 ★★★★★

A step up from the T series (below), this 12in model is large and weighty, with a performance level to match. Fast and tight but capable of dropping very low indeed. HCC #234



REL T-7→£650 ★★★★★

The T-7 uses an 8in driver in tandem with a 10in passive radiator, and features simultaneous speaker-level and LFE inputs and Class A/B amplification. An excellent all-rounder. HCC #223



Bowers & Wilkins PV1D→£1,200 ★★★★★

On of the coolest-looking subs on the planet, B&W's revamped PV1 uses DSP trickery to craft an opulent low-end performance. The touch-sensitive OLED display is pure class. HCC #212



REL Habitat 1→£1,300 ★★★★★

With its LongBow wireless system and wall-mountable design, REL's newest woofer is aimed at those seeking discreet bass. Twin 6.5in drivers work fast and with considerable grip. HCC #231



SVS SB12-NSD→£650 ★★★★

A 12in driver squeezed into the smallest enclosure possible, the SB12-NSD packs a 400W 'Sledge' amp and offers a weighty yet fast and accurate sound. Looks a bit bland, though. HCC #223



Quadral Qube 10 →£525 ★★★★

A gorgeous-looking woofer with a build quality that belies its lowly price tag, the Qube 10 takes Quadral's musical heritage and delivers a controlled, poised performance. HCC #223

TECH INFO



Why use more than one sub?: Using two subwoofers (or perhaps four) should, in theory, bring huge rewards in terms of bass performance. But remember that LFE is a tricky beast to control. Running two subs may simply double problems in your room like room boom and suck-outs, where outgoing and reflected bass sounds cancel each other out. If you have some flexibility in where you place subwoofers, trial and error may well throw up some interesting results. The acoustics wizard Floyd E Toole (his book Sound Reproduction: The Acoustics and Psychoacoustics of Loudspeakers and Rooms is fine bedtime reading) suggests one LFE sub to either side of the room may be best for accuracy while placing them in the front corners would be best for overall bass power. Yet there is no hard and fast rule as to what will work best for every room, and you may find that simply using one (large) subwoofer is preferable as it's the easiest to get sounding right.

DEMO DELIGHT

Oblivion: Joseph Kosinksi's sophomore sci-fi flick looks spectacular on Blu-ray, and its visual panache is matched by a 7.1 audio mix that particularly impresses with its low-end extension. The subwoofer channel here is regularly employed, dropping deep and loud to accompany everything from explosions and weapons fire to the roaring engines of Tom Cruise's recon ship. Love your lows? Then love this.

TOP 5 HD GAMES



Dead Rising 3

Killing hundreds of zombies with an outrageous range of weapons is the order of the day in this delightfully demented sequel. Certainly not the best-looking Xbox One title, but probably the most fun



Forza Motorsport 5

This game's headline trick is delivering its huge car collection and decent selection of tracks in wonderfully detailed 1080p at a silky smooth 60fps. That it's not quite perfect – dodgy Al, for a start – is less important.



Grand Theft Auto V

Rockstar's newest slice of car-jacking, gun-wielding fun is absolutely massive in both scale and ambition – a big-budget game that will leave a big grin on your face. Graphically gorgeous, and the 5.1 mix isn't bad, either.



Assassin's Creed IV: Black Flag

This sequel takes to the high seas for piratical fun, with an enormous open world, absorbing gameplay, beautiful graphics and a soundtrack packed with well-realised ambient effects.



Titanfall

EA redefines the online shooter with this breathtaking arena blaster that ups the ante on the competition with its fluid run-and-gun mechanics, giant mechs you can take control of and gorgeous graphics.



TOP 10 ACCESSORIES

All prices are approx and may have changed



Now TV box →£10 ★★★★

An unqualified bargain, this Wi-Fi VOD streamer from Sky (and built upon Roku hardware) brings BBC iPlayer, Demand 5 and the Roku Channel Store to any HDMI-toting telly, plus subscription access to Sky Movies and Sky Sports. The quality of the adaptive bitrate streaming is impressive, and the £10 tag gets you P&P and an HDMI cable. HCC #226



Sony SRS-X9→£600 ★★★★★

A Wi-Fi, Airplay and Bluetooth speaker with a penchant for hi-res audio, Sony's premium one-box design offers a fine build, quality drivers and a beguiling performance. HCC #235



Devolo dLAN 500 AV Wireless+→£130 ★★★★

Combining Powerline Ethernet distribution with integrated Wi-Fi, this starter kit is a great purchase if you're looking to extend and simplify your home network. HCC #222



Dune HD Base 3D→£250 ★★★★

A media player for the AV enthusiast. Full-width and fully-featured, it provides support for 3D BD rips and much more, with a slick user interface and plenty of connectivity. HCC #235



Sony MDR-HW700DS→£450 ★★★★★

Comfy cans supplied with an HDMI-toting surround processor, enabling multichannel audio to be fed to a virtual 9.1-channel soundstage. The effect is superb – great for late nights. *HCC #234*



Philips Hue→£180 ★★★★★

These Wi-Fi enabled lightbulbs might be expensive (this £180 starter pack includes two, plus the Wi-Fi bridge) but making your own multicoloured lighting scheme is a blast. HCC #220



Philips Screeneo HDP1590→£1,500 ★★★★★

Neatly designed, the Screeneo offers ultra-short throw projection thrills, albeit at 720p (and the DVB tuner is SD). Punchy speakers and networking skills complete a nice package. HCC #233



Roku Streaming Stick→£50 ★★★★

Adopting the same form as Google's Chromecast, this HDMI stick gives full access to Roku's lengthy channel list and enables content sharing from a smartphone. Great for old TVs. HCC #235



Microsoft Xbox One→£430 ★★★★

Not as graphically potent as the PS4 (below) but the new Xbox lives up to its billing as a home entertainment hub – voice control and multi-tasking tricks prove very useful. HCC #230



Sony PlayStation 4→£350 ★★★★

The PS4 offers a killer gaming experience, with the under-the-hood power resulting in great-looking games. Yet it has a few foibles. Wanna play 3D BDs? You'll be disappointed. HCC #229

TECH INFO: MEDIA PLAYERS



What about my TV?: Many flatscreen TVs from the major brands (Sony, Samsung, Panasonic, LG, Toshiba and Sharp) also incorporate media player functionality, using Ethernet or Wi-Fi to stream from your home network, or from plugged-in USB drives. Most modern Blu-ray players offer this, too. However, file support is rarely as extensive as on dedicated devices from the likes of Western Digital and A.C. Ryan, and our experience shows some are more adept at playback from USB than over a network. Nor (obviously) is a TV or BD player portable. If your media collection extends beyond JPEGs and MP3s into lossless audio rips and esoteric HD video formats, then a standalone player is a good investment.

Storage: You can, if you really want, store all your files on a plethora of USB drives, or on your PC, but it's best to get a NAS (Network Attached Storage) device for simplified sharing of your media across a network with



multiple players, such as one from Netgear's ReadyNAS range (pictured). These dedicated devices often offer RAID array file backup, and are managed via browser software. Storage capacity can be anything from 1TB to 12TB and beyond.

TOP 5 BLU-RAY BOX SETS



Game of Thrones: The Complete Third Season

More fantastic fantasy TV delivered on Blu-ray – as with previous seasons, the AV quality here ensures the show's big-budget bombast shines through.



True Detective: Season One

HBO's award-winning eight-part crime series starring Hollywood heavyweights Matthew McConaughey and Woody Harrelson arrives on BD looking great. Essential viewing.



Universal Classic Monsters: The Essential Collection

Bag yourself eight great monster movies given a thorough cleanup by Universal Studios – and marvel at the sheer brilliance of The Creature from the Black Lagoon in 3D.



James Dean: Ultimate Collector's Edition

Warner Home Video has given East of Eden, Rebel Without a Cause and Giant 4K restorations from their original camera negatives. The result is that these 1950s classics look fab.



Doctor Who: The Complete Seventh Series

Audio commentaries, short episode prequels and featurettes are among the extras on this set collecting 15 episodes of TARDIS-based fun. The 1080i transfers impress, too.











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Code HDMIVGAP £59.99



HDMI Distribution Amplifiers

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Code HDC12 1 HDMI input to 2 HDMI outputs £34.99 Code HDC14 1 HDMI input to 4 HDMI outputs £74.99 Code HDC18 1 HDMI input to 8 HDMI outputs £114.99



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Top 5 PVRs



Virgin Media TiVo, **£subscription**

This triple-tuner PVR offers ultimate recording flexibility, useful features – you can undelete deleted shows! - and awesome TiVo functionality. A no brainer if you're in a cable area





Sky+HD, £subscription

Sky's channel choice is second-to-none and its twin tuner 2TB PVR is a perfect partner. The recent EPG tweak is welcome and Anytime (the push VOD service) is brilliant for catching up on new movies





Panasonic DMR-HW220. £250

Panasonic's PVR mixes a 1TB hard drive with its Smart Viera functionality and media streaming – so at £250 it's an absolute steal, regardless of the uninspired design





Pure Avalon 300R Connect, 1TB, £350

Pure's debut Freeview+ HD offering is assured. While it can't match YouView for VOD content, the user interface here is unrivalled and four-way HDMI switching a welcome addition



Samsung BD-H8900, £330

This 1TB model combines a Freeview+ PVR with a Smart BD player. Loaded with bonus features (CD ripping anyone?) but a little uninspired in build, and the IPTV and Freeview elements remain segregated.

Top 5 SOUNDBARS



Yamaha YAS-103, £230

Bluetooth-enabled and app-controllable, this single-enclosure solution boasts a great design and solid build. Audio from its 2.1-channel driver array is rich, clean and surprisingly potent





Canton DM 50, £400

This sturdily built soundbase speaker may lack HDMI inputs but makes up for it with Bluetooth streaming and a full-bodied 2.1-channel performance. Movies and music benefit from clarity and power





Monitor Audio ASB-2, £1,000

This premium proposition marries Monitor Audio's C-CAM drivers with AirPlay and DLNA music streaming. Performance is exemplary - powerful and polished in equal measure





Philips HTL9100, £600

A soundbar/sub that incorporates two removable side speakers to allow it to become a wireless 5.1 system, this Philips is a neat proposition. Easy to install and with a heavyweight sound





Focal Dimension/Sub £1,200

A soundbar/soundbase combi with hi-fi heritage, this uses its wide-dispersion drivers to craft an impressively big soundstage. Hookups include HDMI and optional Bluetooth.

Top 5 SYSTEMS



Panasonic SC-BTT590, £630

The use of new bamboo/ charcoal drivers and noiseshaping tech pays dividends here, with a classy sound quality to match the wealth of features (3D BD, Smart TV and more) ****



Samsung HT-H7750WM, £850

The top-flight system from Samsung in 2014 uses tallboy speakers all around. Plenty of features here and a fulsome 51 performance, but the build quality is a bit disappointing





Harman/Kardon BDS470, £650

Harman's 2.1 system eschews 'net TV and streaming features but majors in heavyweight build quality and solid AV performance. We tested a 2.1 iteration - 5.1 is also available



LG BH8220B, £650

With its silver finish, this is a suitable one-box system to partner with LG's flatscreen TVs, with a commendable, if slightly lacking in HF finesse, sound. Additional features including CD-ripping to USB. Handy



Panasonic SC-HTB570, £350

A commendable slim-line 2.1 system that can also be clicked together to make a soundbar. The punchy wireless subwoofer does a lot of the work. Bluetooth music streaming is onboard



HOME CINED hoice



From small to absolutely huge, the **UK's greatest home cinemas revealed!** Hammer's CEO on resurrecting a movie studio Best in breed – the European Imaging & Sound **Association Awards 2014**

→ ON TEST

Panasonic AS740 LED TV Sony STR-DN1050 receiver **DALI Rubicon 5.1 speakers** Panasonic DMR-BWT740 PVR/player Samsung UE65H8000 TV Tannoy BaseStation One PLUS News, software. opinion, installs and more!

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SONY VP-VW500 NEW HD PROJECTOR

5.1 SPEAKER PACKAGES

SURROUND SOUND: THE MONITOR AUDIO WAY

MONITOR AUDIO RADIUS R90 HT1 NE BLACK | WHITE | WALNUT

WHAT HI FI?

MONITOR AUDIO SILVER 6 AV12 N 2 GLOSS | 4 VENEER FINISHES

> WHAT HI FI? ****

MONITOR AUDIO **MASS 5.1** WHITE WW | BLACK







BEST FOR BUDGET

5.1 SPEAKER PACKAGES

OUR TOP-SELLING SURROUND SOUND PACKAGES

Q ACOUSTICS Q7000i

EPSON EH-TW6100

DALI ZENSOR 5 AV 5.1 BLACK | WHITE | WALNUT

TANNOY MERCURY V4i AV 5.1 NEW MAPLE | DARK WALNUT









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122 OPINION



Point of View

Richard Stevenson is so keen to revamp his movie room to accommodate Dolby Atmos that he's already broken out the plasterboard cutter. But he thinks he might be going it alone

I DO DESIRE a bit of Atmos-sphere with my movies. Ever since Dolby's launch of its Atmos multichannel audio system I have craved such a system for my homestead. Object-based audio on-top of a 'bed' of channel-based sound means every effect and audio nuance can be placed in the room with geometric precision and made to move pretty much wherever it is required. Hark the birds tweeting in the forest behind your left ear; embrace the helicopter panning overhead; beware the Jawas nattering behind the cheese plant. Movies may never sound quite the same again.

Well, that's the theory, and in a commercial cinema Atmos has the potential to sound absolutely stunning. But Atmos in the living room? Since the launch I have harboured doubts whether domestic Atmos was even possible, let alone practical. Yet recently Onkyo, Pioneer, Denon and Yamaha announced forthcoming AVRs with onboard Atmos decoding. And thus we are all set for an Atmos-based home cinema future. Well, I am. I suspect most others won't be.

Stepping up from 5.1

The trouble is, Atmos will, at the very least, require a typical 5.1 or 7.1 speaker setup plus four additional ceiling speakers to create the overhead layer array. Now, how many people can realistically accommodate that in their home cinema? Most home cinema systems still remain stoically 5.1 with few people even bothering to adopt rear-back channels. Outside of dedicated home cinema rooms and multi-squazillion pound custom installs, can Atmos actually become a reality for mainstream home cinema sound? I doubt it very much.

That said, there are two loudspeaker avenues that may just pave the way for an Atmos-based

future. The first is the vastly increased availability and sound quality of in-ceiling speakers and the growing number of retailers and installers that can fit them relatively inexpensively. Most in-ceiling speakers use the ceiling cavity as their 'cabinets', so are much less costly than equivalent freestanding designs. Arguably, you could probably get four in-ceiling speakers installed for Atmos for about the same cash as a decent pair of standmounts for rear-back channels. Do it while the missus is out and, if you are careful to vacuum up the plasterboard dust, she might not even notice.

The second option, mooted by Dolby, is upward-firing loudspeakers. These would sit on top of your main front- and rear-channel speakers and bounce overhead information off the ceiling. The concept could merge into a single speaker cabinet with traditional forward-facing drivers and upward-facing drivers on a second, discrete circuit. I'm personally not a fan of bouncing sound to create pseudo speaker placement but should Atmos live up to its promise and the concept be made to work, then we could see a whole new era of hardware.

In-ceiling speakers have compromises too. With no defined cabinet volume it is difficult to predict their sonic provenance and timbre-matching with your main speakers will be nigh-on impossible unless they are designed for that very purpose. So for me it's got to be ceiling-mounted traditional loudspeakers voiced to match the rest. And four of them, too. Alongside the front height and width speakers, still required for 11-channel Audyssey DSX and DTS Neo: X. And the three subs. That is a whole lot of speaker to fit. And I haven't even considered the power amps yet...

Will you be upgrading your cinema array to Dolby Atmos? Let us know: email letters@homecinemachoice.com







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